3-2023

Effects of Hope Intervention on Hope and Quality of Life in Senior People Who Live Alone

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ABSTRACT

EFFECTS OF HOPE INTERVENTION ON HOPE AND QUALITY OF LIFE IN SENIOR PEOPLE WHO LIVE ALONE

by

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ABSTRACT OF GRADUATE STUDENT RESEARCH

Scholarly Project

Andrews University

School of Nursing, College of Health & Human Services

Title: EFFECTS OF HOPE INTERVENTION ON HOPE AND QUALITY OF LIFE IN SENIOR PEOPLE WHO LIVE ALONE

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Date completed: March 2023

Background

In the United States, there is a growing number of seniors who frequently present with increased risk for reduced hope and quality of life (QOL). Quality of life in the senior population is a world-wide concern and it is believed to be directly associated with their well-being. Senior people living alone experience a higher degree of depression, reduced hope, isolation, falls, and increased mortality. The literature indicates that there is a significant relationship between the level of hope and QOL. Hope is an inner source that plays a vital part in how an individual think and behaves. Hope shapes people's behavior and empowers them to have a positive outlook towards life. Hope builds new opportunities and fills people with strength and satisfaction. The use of non-

pharmacological interventions such as Hope Intervention have a positive effect on hope levels and QOL. Healthcare professionals play an important part in enhancing hopefulness.

Purpose

The purpose of this project was to evaluate the effects of living alone on senior people and offer them a guided hope intervention program (HIP) over an eight-week period. The effects of HIP were measured on hope and the quality of life in senior people who lived alone.

Method

This was an experimental study conducted in-person, with pre- and post-test interventions in experimental and control groups. The study participants were selected through a convenience sample. A final total of 23 participants completed the study. There were 11 participants in the experimental group and 12 participants in the control group. participants Herth Hope Index (HHI) and Older People Quality of Life (OPQOL) surveys were used to assess participants' level of hope and QOL before and after the HIP. Two independent sample t-tests and mixed model ANOVA were utilized to analyze hope and QOL between two groups, before and after the intervention. A Spearman correlation was performed to evaluate the strength of the relationship between hope and quality of life.

Results

Independent sample *t*-tests conducted to examine for pre-test and post-test differences between experimental and control groups showed no statistical significance for hope and QOL. Mixed model ANOVA for hope showed no significant findings.

There was an increase in mean hope scores for the experimental group before and after the interventions, but it was not statistically significant. Spearman correlations conducted to analyze the strength of the relationship between hope and QOL depicted positive associations between hope and QOL.

Conclusion

This project was conducted, through meaningful activities, during the COVID-19 pandemic in order to assess the effects of HIP and to improve the level of hope and QOL in senior people who lived alone. The data demonstrated a statistical insignificance in improving hope and QOL after the intervention, but it had positive influence on the participants. Health care providers should be able to utilize the hope intervention to enhance hope in individuals in all health care settings.

Andrews University

School of Nursing, College of Health & Human Services

EFFECTS OF HOPE INTERVENTION ON HOPE AND QUALITY OF LIFE IN SENIOR PEOPLE WHO LIVE ALONE

A Scholarly Project

Presented in Partial Fulfillment

of the Requirements for the Degree

Doctor of Nurse Practice

by

Sophia Abraham

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APPROVAL BY THE COMMITTEE:

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Member: Rosamond C. Soanes	Date approved

DEDICATION

This capstone scholarly project is dedicated to everyone who has inspired me during my lifetime to achieve this goal.

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LIST OF ABBREVIATIONS

AACN	American Association of Colleges of Nursing
ANOVA	Analysis of Variance
CDC	Centers for Disease Control and Prevention
COVID	Coronavirus Disease
DNP	Doctor of Nursing Practice
DNP Essentials	Essentials of Doctoral Education for Advanced Nursing Practice
EBP	Evidence-Based Practice
ECOG	Eastern Cooperative Oncology Group (ECOG) Performance Score
EFA	Exploratory Factor Analysis
FACT-B	Functional Assessment of Cancer Therapy Breast Cancer
GSES	General Self-Efficacy Scale
HD	Hemodialysis
HHI	Herth Hope Index
HIP	Hope Intervention Program
IRB	Institutional Review Board
OPQOL	Older People's Quality of Life Questionnaire
PICOT	Population, Intervention, Comparison, Outcome, and Time
QOL	Quality of Life
SPSS	Statistical Package for Social Sciences

WHO	World Health Organization

ACKNOWLEDGMENTS

I would like to thank the Lord for providing me the grace and resources to accomplish this goal in my life. I would like to thank my family and all the people who came along side to support me in this journey through their prayers, encouragement, and guidance. I thank Dr. Grace Chi for dedicating her time to help me persevere in my journey to complete this project. I thank Dr. Rosamond Soanes for her prayerful mentorship and encouragement, and for allowing me to conduct the project at her wellness clinics. I want to thank all the participants who took the time to participate in the study. Finally, I would like to thank the School of Nursing at Andrews University for their commitment in assisting me to achieve my professional goal.

CHAPTER 1

INTRODUCTION

The world now faces an unprecedented time where the senior population will soon surpass that of children, thus leading to the majority of the population being old or very old (Zarghami et al., 2018). According to the United Nations, the senior population is the fastest-growing population in the world (Oliveira et al., 2018). In the United States, there is a growing number of community-dwelling senior people who present with increased risks of untoward health effects that come along with aging (Marcus-Varwijk et al., 2019).

Background and Rationale

There is an increase in the number of seniors living alone (Ng et al., 2015). Living alone is one of the noticeable factors that affect the well-being of seniors with evidence that this population most frequently presents with increased risk for reduced hope, depression, deconditioning, falls, injuries, infections, dehydration, and hypothermia (Yeh & Lo, 2004). There is also an increased risk for high mortality because of a lack of social connections and support in this population (Ng et al., 2015). There is an association between living alone and decreased level of hope and quality of life (QOL) in the senior population.

Quality of life is the term used to describe an individual's health and it is an

essential external indicator that reflects the internal being. Quality of life is also perceived as an essential health research outcome (Hayhurst et al., 2014). Even though QOL is usually referred to as the reflection of an individual's health, research findings show that this indicator includes both health-related factors and non-health-related factors such as family, friends, jobs, and circumstances of life (All et al., 2017). The QOL in the senior population is a global issue and a twenty-first-century challenge. Several factors affect QOL in seniors (Ahmed, 2020), and many research studies have been conducted to evaluate this vital indicator in this population. Senior people who live alone experience a higher degree of reduction in their QOL due to isolation, feelings of loneliness, pain, depression, anxiety, powerlessness, and hopelessness. Loneliness is a multi-dimensional and complex feeling which has a significant impact on the health and the well-being of the senior population. Seniors are particularly vulnerable to this feeling because of their fragility (Rocha-Vieira et al., 2019). Many research studies have been conducted to seek the impact of loneliness on physical, emotional, and behavioral problems (Rokach, 2007). Loneliness is a serious threat to seniors' lives and their QOL (Rocha-Vieira et al., 2019). Interventions to promote and increase the QOL are essential in reducing or eliminating the challenges the senior population faces in the twenty-first century.

Hope is an inner source that can enrich life and improve the outlook on life. Studies conducted to assess the level of hope and its effect on QOL show that there is a strong connection between the levels of hope and coping with life events. People who have a higher level of hope adjust to and manage life events effectively with acceptance and normal ways of living (Chi, 2007). People identify different strategies to foster hope and cope with life changes.

The literature review indicated that the utilization of non-pharmacological interventions such as hope and affirmation had positive effects on the QOL Hope is at the core of human psychology and is a powerful vital force linked to health (Stavarski, 2018; Leontopoulou, 2020).

Healthcare professionals have an important role in enhancing hopefulness through hope interventions. Hope can be offered through building relationships with patients and families, being present, listening actively, giving attention to small improvements in care, providing comfort, encouraging hope in their religious beliefs, and giving patients what they needed (Stavarski, 2018).

Hope-fostering interventions and programs aim to promote overall well-being and reduce psychopathology in a variety of populations and various settings such as educational organizations, recreational centers, correctional institutions, and therapy and counseling. Studies indicate that hope-fostering interventions enhance psychosocial outcomes and reduce depression (Larsen et al., 2015; Leontopoulou, 2020).

Problem Statement

The senior population who lives alone faces many challenges that affect their general well-being and overall QOL. Seniors who live alone are more vulnerable to reduced hope and QOL due to a lack of access to the available resources (Haslbeck et al., 2012). With this fastest-growing population, the world faces an increase in the health-related challenges that come with this population. Declining hope and QOL in seniors living alone pose a significant problem both to the healthcare industry and society. While many pharmacological interventions to improve the level of depression and outlook towards life have been used in practice, several non-pharmacological interventions that

are available as an alternative to pharmacological treatments have not been effectively utilized to improve hope levels and QOL in this population.

According to Herth (2001), hope was seen as being vital in strengthening physiological and psychological defenses (Herth, 2001). In nursing, medicine, and mental health, an intervention to give or improve hope had been considered to be one of the interventions. Health care professionals, through non-pharmacological interventions such as touch, being present, listening, encouraging, and providing education, can reduce the feeling of hopelessness and increase the level of hope leading to improved QOL (Binaei et al., 2016). Hope reflected an individual perception of inward potential to overcome a challenge. Due to this very nature of hope, hope intervention was considered as an alternative to medication management in positively influencing the QOL (Stavarski, 2018).

Many senior people live alone with no support from their family or society. They are depressed and without hope. Hope intervention has shown good effects on decreasing depression and increasing s sense of hope in other populations (Salamanca-Balen et al., 2021). However, not many studies have been done on the effects of hope intervention on senior people who live alone. Hence, this study plans to evaluate the effects of Hope Interventions on senior people who live alone through the Hope Intervention Program (HIP).

Purpose Statements

The purpose of this project was to investigate the effects of a non-pharmacological intervention, the hope intervention, on hope and the QOL of senior people who lived alone.

PICOT Question

How does the implementation of an eight-week hope intervention in seniors 65 years and older who live alone affect their level of hope and quality of life compared to those levels in seniors 65 years and older who live alone and do not receive the hope intervention?

P – Seniors 65 years and older who live alone

I – Hope Intervention Program

C – Seniors 65 years and older who live alone and receive hope intervention and those who do not receive hope intervention

O – Level of hope and QOL

T – After eight weeks of the hope intervention program

CHAPTER 2

LITERATURE REVIEW/CONCEPTUAL DEFINITIONS/ THEORETICAL FRAMEWORK

Literature Review

The purpose of the literature review was to examine previous research on the effects of hope intervention on the level of hope and QOL and how that may affect senior people who live alone. The literature review was completed by using the EBSCOhost health search engine, which included other databases such as the Cumulative Index to Nursing and Allied Health Literature (CINHAL), Google Scholar, PubMed, and ProQuest. Studies were selected based on their relevance to the current study.

Keywords: Seniors, elderly individuals, loneliness, loneliness in older adults, chronic diseases in older adults, well-being, quality of life in older adults, loneliness and quality of life, hope, hope interventions, and hope interventions in seniors.

Hope

The word “hope” comes from Old English word “hopa” and translates to having confidence in the future (Safri, 2016). Very few people are knowledgeable in the science of hope (Gwinn & Hellman, 2019). Hope is seen as something aspiring, a positive anticipation of the future, something good to look forward to. It is usually directed towards the future and reflects personal will power (Safri, 2016; Van Dongen, 1998).

Hope is as old as humanity and vital for the existence of humanity. Hope influences how a person thinks and acts. Hope not only shapes people's behavior, but also motivates them and enables them to keep going during times of distress, discouragement, and disappointment. Hope creates new possibilities and fills people with strength, courage, and happiness to move on in life with renewed energy (Safri, 2016). When individuals have hope, they can change the course of their situation (Van Dongen, 1998). Hope's desire can be long-term and even a lifelong endeavor. Hope represents how individuals perceive their ability to frame their goals, create strategies to meet those goals, and sustain their motivation to implement those strategies (Chi, 2007; Snyder et al., 2003). Hope can grow and thrive in the environment where a culture of hope is valued.

Culture of Hope

Hope is recognized as a bridge between the impossible and the possible. Hope is sometimes dramatic in harrowing and life-saving events, while at other times, it is seen in the quiet activities of daily life. Martin Luther King, Jr. embraced hope as the foundation of creating a hopeful world. He used to love to say that everything that is accomplished in the world was accomplished by hope (Gwinn & Hellman, 2019). Once people understand hope, they have the choice to believe in it and then put forth efforts to obtain it. Once individuals achieve hope, then they can recruit others to develop a community of hope, thus creating a culture of hope. There is a greater power in the collective culture of hope than individual hope. Building a culture of hope has shown to support individuals with purpose, pride, place, and optimism (Gibson & Barr, 2017; Gwinn & Hellman, 2019). Where the culture of hope is not promoted, outcomes can be less than optimal and

leading to a negative outlook towards life and reduced QOL.

Hope, Illness, and Healing

Illness is a disease condition in which the body or mind is affected. Healing is an act or process of restoring to health. Hope can play a vital role in healing and coping. Medical professionals and researchers are increasingly seeing hope as a dynamic, cognitive, emotional, and motivational process, as well as a way to cope with disease conditions (Salamanca-Balen et al., 2021). Hope can help individuals cope with serious and chronic threats to their physical and psychological well-being, leading to enhanced QOL (Salamanca-Balen et al., 2021). While hopelessness has been linked to depression and suicide, hope involves having confidence in and expectations of a brighter future in the face of adverse circumstances (Gupta & Singh, 2020). In psychological and psychiatric literature, hope is seen as a longing for the betterment of a hopeless outcome, operationalizing it as a positive goal-related (future-oriented) motivational state and a dispositional trait that signals a tendency to adopt a positive outlook (Gupta & Singh, 2020). It has further been established that hope can be measured as an essential restorative factor in the field of healthcare and recovery (Lucas et al., 2019). Hope can also be fostered through interventions in individuals facing adverse health conditions, loneliness, and from living alone (Gupta & Singh, 2020).

Quality of Life

Within the arena of health care, QOL is viewed as multidimensional, and encompassing physical, psychological, emotional, and social well-being. Quality of life is a multifactor and a value-driven concept (Soósová, 2016). The most important aspects of

QOL in the elderly are autonomy, decision-making power, independence, self-sufficiency, preservation of health and sensory abilities, absence of pain and illness, economic security, connectedness with family and friends, and peace and happiness. Quality of life in the elderly can be negatively influenced by many demanding factors related to the aging process. The elderly faces a variety of challenges ranging from changes in health status, identifying with new roles, adjusting to changing social support, and coping with new restrictions in life posed by the aging process (Soósová, 2016).

Elderly people suffer from economic insecurity and loss of power as they age and retire from their work, thus leading to reduced QOL. The QOL of the elderly has been a global concern and is becoming increasingly important for research because of its effect on public health (Wayadande & Prabhakar, 2020). Quality of life in the elderly is directly associated with their perceived well-being; hence, it is essential to provide the elderly with the opportunity to live a long quality life with an understanding that the aging phenomenon is not only physical, but also a social element that affects how the elderly feel, live, relate to their life, to other people in their lives, and to their environment (dos Santos Gomes et al., 2020).

Quality of Life in Senior People Who Live Alone

Quality of life is impacted by living alone. Solitude is worst when people live alone. They are more vulnerable to poverty, and deprivation becomes more probable the longer they live alone. Many elderly individuals who live alone express feelings of isolation and loneliness. Given that dining is primarily a social activity for most individuals, some elderly persons who live alone do not make complete, well-balanced meals (Davie-Smith et al., 2017). Eating habits especially tend to change over time

because chronic conditions may overpower the aged and even the strength to prepare a meal for themselves is a great struggle. The lack of a balanced diet causes their health to deteriorate. Again, the lifespan of older adults living alone declines each day of their lives. This could be because of illness due to underlying issues (O'Súilleabháin et al., 2019).

Factors Affecting the QOL in Senior People

Aging is the progressive phenomenon of change in the physiological, psychological, and social aspects of an individual. Aging is seen as a holistic concept since it involves a broad range of issues (Ahmed, 2020). According to the World Health Organization, those who are entering into their senior life-cycle experience biological, social, and psychological changes (Bahramnezhad et al., 2017).

In the United States, debilitating conditions such as heart disease, dementias, type 2 diabetes, arthritis, and cancer are the leading drivers of disability, deaths, and healthcare expenditure. Studies indicate that seniors age 60 and older experience Alzheimer's disease and other dementias at a greater rate compared to other age groups, and the risk for these conditions increases with age. Healthcare and long-term care expenses associated with these conditions greatly increase the financial burden of healthcare in the United States to the amount of $290 billion in 2019 (CDC, 2020).

Loneliness and Its Effects on QOL

Loneliness plays a vital part in the physical, psychological, and social deconditioning of seniors who live alone. Human beings, generally speaking, are social creatures who, in order to live successfully, need safe and secure social environments to

thrive (Hwang et al., 2020). Social connections that are satisfying are essential for both mental and physical well-being. Having strained social relationships may contribute to feelings of loneliness. People who participate in meaningful, valuable activities with others have a better mood, live longer, and have a greater sense of purpose than those who do not. According to research, these activities seem to aid in maintaining mental well-being and may even enhance their cognitive performance. The perception of loneliness as a worldwide human issue has existed since the beginning of humanity (Hwang et al., 2020).

Isolation may result in various mental illnesses, including depression, sleep difficulties, personality disorders, alcoholism, and Alzheimer's disease. There are also numerous physical illnesses such as type 2 diabetes, autoimmune illnesses, osteoarthritis, lupus, as well as cardiovascular problems such as heart disease, physiological aging, high blood pressure (HTN), cancer, obesity, and poor health are all examples of chronic conditions and impaired hearing as a result of smoking (Hwang et al., 2020). The effects of loneliness on people’s emotional and physical health, if left untreated, may be very detrimental. As a result, it is critical to act at the appropriate moment to avoid loneliness and ensure that patients’ physical and emotional health is preserved.

Loneliness is primarily evident in senior people. Research shows that this could be due to living alone, detachment from the tradition of origin, or neglect by close family ties (Hwang et al., 2020). This causes the elderly not to participate fully in society. Loneliness, especially in seniors, has been linked to an increased risk of anxiety, sadness, cognitive decline, vascular dementia, and even mortality. Particularly vulnerable are those who find themselves suddenly alone due to circumstances such as the death of a

spouse or partner, retirement, separation from friends or family, loss of mobility, or lack of transportation. Physical effects like sleep deprivation, weight gain, weak immune system, and poor heart health can be evident (Hwang et al., 2020).

Effects of COVID-19 and Isolation on Seniors

During the outbreak of Covid-19, social isolation became mandatory in most places, especially for the elderly because they were most vulnerable to this virus. Regardless of whether they were infected or not, the elderly, were restricted to their homes. It had been suggested that the impacts of COVID solitude might be particularly acute among older individuals in long-term care (LTC) amenities (Kasar et al., 2020). The literature review indicates that residents' feelings of loneliness, despair, abandonment, and fear and their impact on neurobehavioral health contributed to the rise in the number of deaths associated with the epidemic. Seniors' physical and mental health was adversely impacted by the social distance that occurred throughout the COVID-19 pandemic. As a result, throughout the confinement period, a multi-component program that included exercise and psychological techniques were highly suggested for this group of people (Kasar et al., 2020).

Hope and Quality of Life

Important aspects of QOL include autonomy, decision-making, independence, self-sufficiency, preservation of health and sensory abilities, absence of pain and illness, economic security, connectedness with family and friends, and peace and happiness (Soósová, 2016). Quality of life is one of the most important factors that affect the disabled and elderly (Zareei Mahmoodabadi et al., 2019). Quality of life in the elderly

can be negatively affected by many demanding factors related to aging. Elderly individuals face a variety of challenges ranging from changes in health status, adapting to new roles, adjusting to changing social support, economic insecurity, and coping with new restrictions posed by advanced age (Soósová, 2016).

Quality of life of the elderly has been a global concern and is becoming increasingly important for research because of its effect on public health (Wayadande & Prabhakar, 2020). Quality of life in the elderly is directly associated with their perceived well-being; therefore, it is essential to provide the elderly with the opportunity to live long, quality lives and the understanding that aging is not only physical, but also affects how individuals feel, relate to their life, to other people, and their environments (dos Santos Gomes et al., 2020). A perceived sense of wellbeing is essential and is strongly related to improved QOL.

Researchers have long sought to understand the association between hope and QOL. One study indicates that vitality is one of the important mechanisms accounted in attaining hope and thus leading to improved QOL. Vitality reflects an individual's subjective experience of energy and activity. Vitality is associated with better physical and psychological health in adults (Lucas et al., 2019). In order to evaluate vitality's role in mediating the relationship between dispositional hope and QOL, Lucas et al. (2019) recruited a sample of 101 adults from a community-based primary care setting in the United States. The sample included 72 women and 29 men, mostly Caucasian, from 18–64 years of age. Lucas et al. (2019) assessed hope using the Hope Scale; previous researchers identified positive relationships between the Hope Scale and personal control and self-esteem measures, indicating validity for the scale. Lucas et al. (2019) found that

vitality fully mediated between hope and QOL, which included aspects of physical health, psychological health, social relationships, and environment, confirming the fact that vitality is a significant mechanism through which hope affected QOL in adults. The results indicated the need for promoting environments that foster vitality to help activate hope and promote QOL of adults.

Adult QOL can be negatively impacted by issues related to aging and disease. The QOL of older adults includes social, psychological, physical, and spiritual factors. Additional individual-level characteristics that affect well-being include activity, productivity, income, social status, physical and mental health, longevity, cognitive efficacy, strong relationships, and satisfaction in life (da Silva & Baptista, 2019). Lack of purpose in life can lead to reduced QOL and to negative perceptions of life, which can then lead to reduced hope and meaning in life (Binaei et al., 2016). Focusing on vitality when caring for adult patients can help facilitate hope and lead to enhanced QOL outcomes (Lucas et al., 2019). Hope as an inner force has been shown to strengthen and uplift individuals' spirits and allow them to look beyond current circumstances (Binaei et al., 2016).

Researchers have also focused on medically oriented external factors in relation to hope, such as chronic illnesses, health disparities, health insurance, and how they are linked to QOL. Chronic illnesses can lead to impaired functional ability (Binaei et al., 2016). Considering the health disparities related to insurance in the United States, Wippold and Roncoroni (2020) conducted a study involving structural equation modelling and 197 adults living with at least one ongoing comorbid ailment. They examined the relationships between various chronic health issues, the two components of

hope related to agency and pathways, and the health-related QOL among the population. Pathways and agency are two essential factors in achieving any desired goals. Pathways are ways people identify that will aid them reach their goals. Agency reflects individuals' perception of their ability and the drive to achieve their goals. In this study, the hope of the individuals was tested using the State Hope Scale. They found that multiple comorbidities, including heart disease, stroke, diabetes, and cancer negatively impacted the high quality of life of the affected populations. The findings further indicated that agency mediated the relationship significantly, resulting in positive outcomes (Wippold & Roncoroni, 2020). Wippold and Roncoroni (2020) emphasized that it is important to encourage individuals to take charge, have hope, and control their lives in order to manage chronic health diseases and survive despite the difficulties. Gaining the motivation to achieve their goals and control their health could enhance hope, even in the face of long-term diseases and being uninsured or underinsured. An improved attitude of readiness to attain goals along with hope can help enhance the QOL and health status (Wippold & Roncoroni, 2020). In an earlier study, Binaei et al. (2016) also found that severity of heart failure and an uncertain prognosis of this disease impact QOL negatively; however, hope-promoting strategies were found to be beneficial in improving this condition. Hope is dynamic and can empower individuals to reach the desired goal (Chamodraka et al., 2017).

Researchers have also investigated the relationship between hope and QOL in various types of patients. Alshraifeen et al. (2020) studied the correlation between hope and QOL among hemodialysis (HD) patients in Jordan. The researchers contended that hope was important for end-stage renal-disease patients. These individuals received HD

to manage the condition, and hope was thought to be closely related to QOL in this population. The study involved a cross-sectional design, and 202 convenience patient samples from six varying dialysis centers were included to evaluate the association between hope and QOL. The World Health Organization QOL-BREF and the Herth Hope Index (HHI) were used to measure QOL and hope, respectively. The researchers identified moderate levels of hope with a viable mean, and participants showed low mean scores for physical, domain-related QOL. The results revealed that the physical domain might not be related to hope. However, the findings also revealed that the social and psychological relationship aspects had improved hope levels related to the QOL. Overall, study results indicated a positive correlation between the level of hope and QOL in people receiving HD for end-stage renal disease (Alshraifeen et al., 2020). Patients receiving HD to manage end-stage renal conditions needed assistance developing hope in their environments. Alshraifeen et al.'s (2020) findings emphasized that introducing hope and promoting care while serving HD patients in healthcare facilities could improve their QOL. These patients often experienced considerable levels of stress since they had to attend HD sessions for the rest of their lives and they required quality care to improve their health outcomes. The results showed that understanding the association between hope and QOL could help healthcare professionals improve the type and level of care provided to their patients and their families. This information is essential in giving hope when caring for HD patients in consideration of the expected positive outcomes in their QOL (Alshraifeen et al., 2020).

Quality of life can also be critical in the decision-making process related to medical conditions, their management, evaluating outcomes, and future interventions.

Shen et al. (2020) investigated the correlation between hope, self-efficacy, and social support in 121 triple-negative breast cancer patients as they battled the condition. The study included a cross-sectional design and patients at the breast cancer treatment center in Tianjin Medical University Cancer Institute and Hospital, Tianjin, China. The researchers used convenience sampling to bring participants on board. Participants were above 18 years old, receiving post-surgery chemotherapy with no prior diagnosis of cancer, and could communicate in Chinese (Shen et al., 2020). Shen et al. used the HHI to measure hope, the General Self-Efficacy Scale (GSES) to measure self-efficacy, and the Functional Assessment of Cancer Therapy Breast Cancer (FACT-B) to measure QOL. Data were analyzed with independent sample *t*-tests, one-way Pearson correlation, and multiple regression analysis (Shen et al., 2020). Shen et al. (2020) found that hope, self-efficacy, and social support were strongly correlated with the QOL in breast cancer survivors ($P<0.001$). Higher-income was shown to contribute to better QOL. The multiple regression analysis of this study showed that hope, income, cancer stage, self-efficacy, and social support were significant predictors of the patients' QOL ($P<0.001$). Hope, social support, self-efficacy, and income were observed as positive factors of QOL, while the cancer stage was the negative predictor of the QOL (Shen et al., 2020). Hope, a positive predictor of QOL, was an effective strategy that provided adaptive power to help cancer patients overcome a difficult situation and achieve desired outcomes (Chi, 2007). Shen et al.'s (2020) study highlights the need for intervention programs to support and improve income, hope, self-efficacy, and social support for this patient population in order to improve their QOL.

Understanding the needs of the elderly is crucial to caring for them

(Bahramnezhad et al., 2017). One of the domains of well-being involves the social aspect of QOL. A supportive environment or a sense of community plays a vital part in individuals recovering from an injury or assault (Bahramnezhad et al., 2017; Stevens et al., 2019). Considering the challenges individuals endure in the disease recovery process, Stevens et l. (2019) conducted a cross-sectional study using a sample of 229 individuals from three Oxford houses, including democratic, self-running recovery homes, and the largest network of self-recovery homes in the United States, to identify the role of hope and community in supporting recovery. Stevens et al.'s (2019) study included a 55% male and 44.5% female population with the mean age of 38.4 years from multiple ethnic groups. Stevens et al. used Snyder's State Hope Scale to measure hope, the Psychological Sense of Community Scale to measure sense of community, and the World Health Organization Quality of Life Assessment Brief Version to measure the QOL. Stevens et al. (2019) assessed whether hope and sense of community predicted the QOL for populations living in recovery homes, and the findings revealed that both hope and sense of community were primary predictors of QOL, suggesting they can aid significantly in the recovery process. However, age, race, and length of stay did not impact the QOL and hope during recovery (Stevens et al., 2019). There is a strong relationship between all aspects of social networks and QOL. While hopefulness is often conceptualized as an individual-level factor, Stevens et al.'s (2019) findings emphasized that hope can originate from a sense of community, and both factors can lead to improved QOL, thus aiding in recovery. Stevens et al. (2019) recommended that hope and a sense of community be encouraged to improve QOL and recovery in patients with challenging conditions. Another study indicated that creating an environment to promote and improve

relationships among the elderly and other social networks of family, friends, and neighbors has shown to lead to an improved QOL in the elderly (Bahramnezhad et al., 2017). Based on the previous researches, the current study may indicate improvement in the physical, emotional, and psychological aspects of QOL in the elderly through hope-promoting interventions.

Hope Interventions

Hope intervention is a valued phenomenon that has the power to bring positive outcomes to the lives of humans during a crisis. Hope is embraced as a protective experience for people in challenging conditions. Studies indicate that hope-fostering strategies in the face of difficult situations have been shown to help individuals in sustaining, continuing, and enduring life events. Several studies have been conducted to evaluate the effects of hope intervention in various situations (Zareei Mahmoodabadi et al., 2019).

Herth (2001) conducted a study to develop and evaluate the Hope Intervention Program (HIP) based on Hope Process Framework. The study was conducted on a convenience sample of 38 adults with the first recurrence of cancer who were going through cancer treatment. The main research variable was to assess the helpfulness of HIP components in maintaining hope. The HIP was composed of eight sessions to address four attributes of hope derived from the Hope Process Framework: the experiential process, relational process, spiritual or transcendent process, and rational thought process. The HIP was administered over the course of eight weeks, where participants met as a group for a 2-hour session each week. The entire study lasted for more than 18 months. Study participants were evaluated at the end of the study, and then

at three, six, and nine-month intervals after the last session. Study results indicated that HIP had a positive impact on participants in rebuilding and maintaining a hopeful outlook towards life (Herth, 2001).

The elderly phase is a period that can greatly and adversely impact the QOL because the aging process leads to physical and mental changes that can result in diminished self-confidence and uncertainty, thus necessitating effective hope interventions. Zareei Mahmoodabadi et al. (2019) conducted a study using a pre-test and post-test design to assess the effectiveness of a hope therapy program. The sample included 24 elderly women in daily care centers with participants divided into two groups: the experimental group (n=12) and the awaiting group (n=12). The hope therapy program consisted of eight sessions for the experimental group, and they used the Quality of Life Scale to measure the impact of the therapy on the experimental group (Zareei Mahmoodabadi et al., 2019). The researchers compared the hope levels between the experimental and awaiting groups and found a significant difference between the populations. The multivariate analysis of variance (MANOVA) analysis used by the researchers indicated that the depression, anxiety, physical function, mental performance, and satisfaction in life of those in the experimental group improved significantly after participating in the hope therapy program. Zareei Mahmoodabadi et al.'s (2019) results indicated that hope therapy can be an effective intervention for improving the QOL in elderly populations. The study also showed that elderly individuals can benefit from hope therapy. Daily care centers should consider instituting hope therapy routinely to improve QOL outcomes for elderly populations (Zareei Mahmoodabadi et al., 2019).

Hernandez and Overholser (2021) observed that there were limited studies on

interventions targeting hopelessness/hope and that most studies targeted associated constructs like sociality and depression and entail secondary measures of hopelessness/hope. They conducted a systematic review of hope/hopefulness interventions for older adults by reviewing existing literature to evaluate the effectiveness of these interventions. They evaluated 36 studies and concluded that psychological interventions dependent on life review effectively enhanced hope in various samples including grieving, depressed, or medically ill patients. Findings also revealed limited support for exercise programs, education interventions for the ill, exercise for the elderly, and dignity therapy for patients. Life review-based interventions included self-directed expression exercises or therapeutic discussions to assist individuals envision their life from a longitudinal aspect in order to promote hopeful and purposeful meaning in life (Hernandez & Overholser, 2021).

Knowing that a terminal or serious disease diagnosis can negatively impact the affected populations significantly, Salamanca-Balen et al. (2021) conducted a systematic review of the literature on the effectiveness of hope-fostering interventions in palliative care. Salamanca-Balen et al. (2021) used the Cochrane criteria to assess for bias in the studies they reviewed. Their review of the literature showed that hope interventions resulted in increasing hope levels, decreased depression levels, and improved outcomes in the psycho-spiritual well-being in palliative care patients affected by chronic illnesses. However, hope did not enhance QOL for palliative care patients (Salamanca-Balen et al., 2021). While Salamanca-Balenet et al.'s (2021) study highlighted the impact of hope on improved outcomes in palliative care patients, further research is needed to confirm the results, especially in elderly populations.

Hope and the Elderly

Hope has also been linked to resilience, which can help elderly individuals cope with the loneliness of living alone. Gupta and Singh (2020) conducted a correlational study involving purposive sampling to examine the relationship between resilience and hope in the elderly. The sample included 151 elderly individuals aged 60 to 80. Researchers used the Connor-Davidson Resilience Scale and Adult Hope Scale to measure levels of resilience and hope, respectively. The data were analyzed by T-test, ANOVA, and the Pearson correlation coefficient (Gupta & Singh, 2020). These researchers found a moderate positive correlation ($r= 0.741$) between hope and resilience in the elderly, suggesting that hope can assist older people to meet adverse challenges. This study also revealed that loneliness played a significant part and was found to be positively correlated with depression and anxiety and negatively correlated with self-efficacy, resilience, and psychological and physical health. High resilience, a way of adapting well to adverse and uncertain circumstances, was strongly associated with positive outcomes including lower depression levels and increased longevity. The researchers also found that age, marital status, living standards, the number of family members and their occupations, among other basic factors, were associated with resilience and hope; however, gender did not impact resilience and hope. Older people living alone should be moved to environments where they can interact or have opportunities to interact with others to help enhance hope and resilience. The study showed that hope and resilience were related in the elderly population, and resilience could lead to improved QOL (Gupta & Singh, 2020).

To examine the subjective well-being and hope in the elderly, Gupta and Singh

(2019) conducted a correlational study comprised of 151 elderly individuals 60–80 years of age. The study was designed to compare the well-being and hope levels of institutionalized and non-institutionalized elderly individuals. The population was chosen for the study iterate to a mean age of 70.83. Random sampling led to 79 participants from two nursing homes in Kanpur City, and 72 participants were randomly sampled from older people living with their families (Gupta & Singh, 2019). Gupta and Singh used the subjective well-being tool (1992) to measure participants' well-being or ill-being and they used the Adult Hope Scale to measure hope levels. Study results revealed that institutionalized elderly had better overall subjective well-being and scored high for hope status compared to non-institutionalized individuals (Gupta & Singh, 2019). The results showed that there was a significant difference in the well-being status between these two populations. The study also revealed that the mean value of ill-being for non-institutionalized individuals was higher than that of institutionalized individuals. The non-institutionalized individuals had limited support from their family members, unlike institutionalized elderly populations who were scheduled for therapy sessions in their centers. The researchers concluded that the limited opportunities for interactions for elderly individuals could result in psychological problems, loss of hope, and induced ill-being that deters well-being. The institutionalized elderly showed a significant difference in their levels of hope outcomes, indicating that their environment encouraged wellness-promoting hope and general well-being. These results indicated the need for family members to support and comfort the elderly to enhance their hope and improve their well-being. Aged populations need care and attention for positive psychological settlement that eventually results in their well-being (Gupta & Singh, 2019).

Effects of Hope-Fostering Strategies in Seniors Who Live Alone

There are several methods for fostering hope in seniors such as leaving a legacy, accomplishing short-term objectives, supporting relatives and friends, turning off your mind, signs of hope, bright ideas, truthful information from healthcare providers, and symptom management, among others (Salamanca-Balen et al., 2021). Older individuals may need different ways of sustaining and nurturing optimism than younger ones. In addition, it is easy for hope to have a long-lasting impact on the health and well-being of people throughout their lives. It is a critical psychological resource that assists people through a range of challenging situations in their lives.

Furthermore, hope has been recognized as a critical component in developing a feeling of meaning and purpose in one's life and the improvement of overall QOL in older people (Salamanca-Balen et al., 2021). As people get older, they often face cognitive and emotional difficulties and losses in their lives. These difficulties and failures resulted in their inclusion in assisted care facilities for some of these adults. As a consequence of moving into long-term care, older people may experience additional losses, increasing their susceptibility to despair, sickness, and loss of hope. As a result, finding methods to instill hope in the hearts of senior people is critical in maintaining and ensuring health and wellness (Salamanca-Balen et al., 2021).

Summary

The literature review for this research revealed a notable association between hope and QOL. The QOL of the elderly has become a subject of increased research due to the rising risk of becoming public health threat. Studies indicate that QOL in the elderly was intertwined with their perceived level of well-being; hence, it was important to

provide them with all the resources needed to live a long, quality life. Hope is a vital force that affects QOL in the elderly and plays an important part in coping and healing. Several studies reveal the importance of hope-promoting strategies in improving QOL. The literature review indicates a gap in the knowledge surrounding the effects of hope on QOL in the senior population. The current study was designed to examine whether there was improvement in the physical, emotional, and psychological aspects of QOL in the elderly with a mixed-gender sample after hope therapy.

Conceptual Definitions

Senior People

The senior population is defined as people aged 65 and over (Organization for Economic Co-operation and Development, 2021; Wayadande & Prabhakar, 2020). For this research, senior people were defined as those who are 65 years of age and older.

Living Alone

For the purpose of the current study, living alone as seniors who lived in their own residences, predominantly by themselves.

Quality of Life

Nursing in gerontology and geriatrics ranks QOL as one of the most essential indicators (Soósová, 2016). The WHO defined QOL as “an individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns” (Whoqol Group, 1994, p. 11). WHO defined QOL in a broader sense that included physical, mental health, social relationship, level of independence, and personal beliefs (Wayadande & Prabhakar,

2020). Quality of life is the degree to which an individual is healthy and independent and can participate actively in life events. The current study administered the Older People's Quality of Life Questionnaire (OPQOL) scale before and after the interventions to assess and measure QOL in study participants.

Hope

According to Webster's Dictionary, hope is a concept of the future: "To desire with expectation of obtaining fulfillment" (Merriam-Webster, n.d.a). The definition of hope, according to the Oxford English Dictionary, is "grounds for believing that something good may happen." (Gwinn & Hellman, 2019, p. 8.). In current study, hope was measured by the Herth Hope Index (HHI).

Hope Intervention

According to Webster's Dictionary, intervention is defined as an action taken to affect an outcome or improve a situation (Merriam-Webster, n.d.b). Hope intervention is described as hope-seeking and hope-inspiring strategies that foster hope in individuals (Herth, 2001). This study utilized the eight-week Hope Intervention Program (HIP) developed by Dr. K. Herth to enhance hope and QOL in seniors who lived alone. After implementation of the eight-week program, the hope and the QOL levels were measured using the HHI scale.

Theoretical Framework

The theoretical framework helps understand the association between interventions and their effect on people's overall well-being. Theoretical assertions describe the relationships that exist among the main concepts of the theoretical model. They aid in

developing the appropriate plans and interventions for practice and they also assist in evaluating the effectiveness of the interventions for further applications (Butts & Rich, 2015). Betty Neuman's systems model (1972) was used as the theoretical framework for this project (Alligood, 2018).

Betty Neuman's Systems Model

Betty Neuman, a nursing theorist, unfolded Neuman's systems model (1972). Systems theories such as Betty Neuman's systems model (1972) are grounded on the premise that individuals consist of systems that are connected to and influenced by one another. Two assumptions of this theory are that energy is required to maintain the harmony in an organizational state, and any dysfunction in one system has an influence on other systems (Butts & Rich, 2015). The wholistic nature of the model allows for a wide range of creativity and has been used in a wide variety of healthcare settings.

Neuman's systems model's approach to understanding the nature of system stability and how to prevent system damage made this model an appropriate framework for the current project. Because of its premises, Betty Neuman's systems model (1972) was chosen to guide this study.

Betty Neuman proposed that the person should be treated as a whole system. Neuman's systems model consists of four metaparadigm concepts: person, health, environment, and nursing. This model focuses on the human needs for protection or relief from stress (de Almeida et al., 2018).

Person

Neuman's model views clients as a whole person with many parts that are in dynamic interaction with one another (Figure 1). The systems model indicated that five variables—physiological, spiritual, psychological, socio- cultural, and developmental—all simultaneously affect the client system (Alligood, 2018; Butts & Rich, 2015).

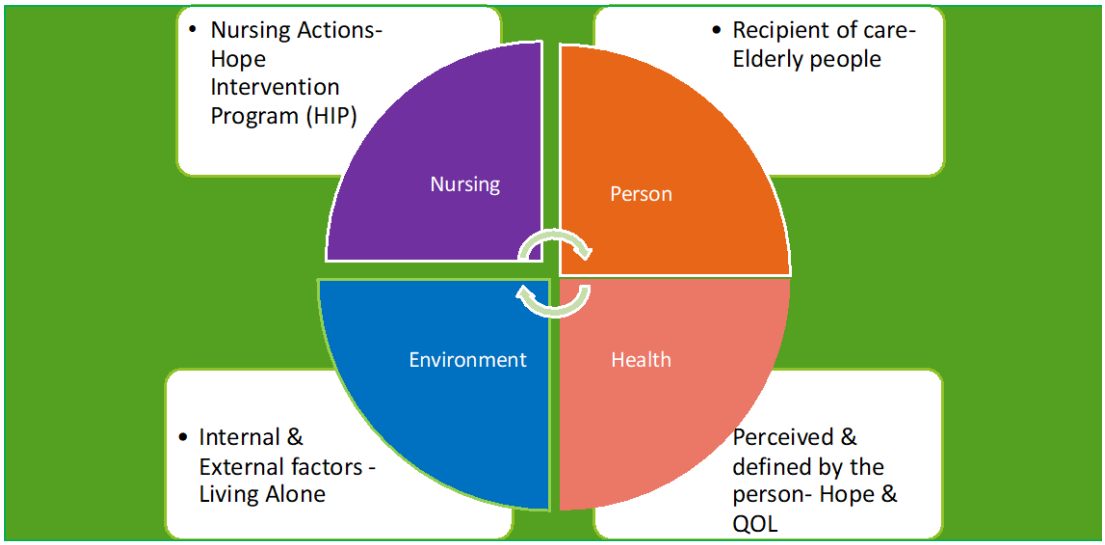

Figure 1. Neuman's systems model: Nursing metaparadigm concepts.

The physiological aspect of care pertains to the physical body structure, the socio-cultural reflects the influence of social and cultural components, the psychological refers to mental interaction with the environment, the spiritual factor pertains to the influence of spiritual beliefs, and the developmental component refers to age-related processes and activities (Ahmadi & Sadeghi, 2017). Because this model focuses on retraining wellness and ensuring optimal wellness, Neuman classified her systems model as a wellness model (Alligood, 2018; Butts & Rich 2015).

The purpose and the contents of the HIP in the current study was to provide

interventions, keeping in mind the wholistic nature of an individual. The project manager implemented interventions through HIP that included social, relational, spiritual, and rational processes to address any impact of living alone on hope levels and QOL in order to promote wellness in these areas.

Environment

The Neuman (1972) systems model holds that human beings are open systems that interact with environmental stressors (see Figure1; Alligood, 2018). The environment is defined as external, created, or internal factors that can affect the system. The internal environments are found within the system; created environments are developed unconsciously, while external environments are developed outside the system (Alligood, 2018; Neuman & Fawcett, 2012). The clients are in a relationship with their environment where they interact with their environment by adjusting to the environment or by adjusting the environment to themselves (Braga et al., 2018; Cunha et al., 2019).

All factors, whether they are possible or actual responses to stressors, affect individuals. Stress can be termed as augmenting, inescapable, and painful; it is generally considered an intuitive state of mind that can be uncontrolled. Neuman's model focuses on individuals' relationship with stress, how to handle it, and its reconstitution (de Almeida et al., 2018). The major challenge is seeking a solution to eliminate or minimize the effects of stressors in the system. Interventions should be aimed at maintaining stability between the environment and the variables of the clients (Alligood, 2018). Neuman described that adjustment is a process by which individuals meet and satisfy their needs. Since many needs are present that can affect stability and balance, the adjustment process is dynamic and continuous.

Aging poses greater challenges and living alone can contribute to the exacerbation of underlying issues affecting the level of hope, outlook towards life, and the QOL in seniors. Stigmatization and isolation are external factors that trigger stressors in senior people. These stressors can further lead to created and internalized environments of loneliness, which can then affect their level of hope and QOL and pose serious health risks. This study proposed to examine the effects of HIP that can assist in this process of adjustment. The HIP interventions to establish a caring and supportive environment and build a sense of community through interventions addressed some of these challenges of improving the level of hope and QOL in senior population.

Health

Neuman considered her system theory as a wellness model. She defined health as energy that yields the highest quality system stability at any point. Neuman perceived health as a continuum or scale of wellness to sickness, which is dynamic and always subject to change. According to the model, there is optimal wellness (negentropy) when the system's needs are met; when they are not met, there is sickness, and when there is insufficient energy to support life, then death results (entropy; Alligood, 2018).

Every participant in the study had a unique system. If adaptation to the changes and challenges that came as a result of living alone were not stable, they could experience a breach in the continuum of the system leading to less-than-desired levels of wellness. Through HIP, the project manager promoted the individual's system stabilization through acquirement, retention, and maintenance of optimal wholeness and wellness in the participants (de Almeida et al., 2018). Through HIP, the sense of hope level and QOL which pertain to the health and wellness spectrum may be improved and maintained in

addition to stabilization of the wellness system.

Nursing

According to Neuman's philosophy, nursing is a unique profession that is concerned with all the factors affecting the individual and thus believes in the importance of providing the wholistic approach (Akhlaghi et al., 2021). In this model, the nurse is considered a key participant with the client; the nurse is interested in assessing how the clients are affected by environmental stressors such as living alone, as in this study. The seniors adjust to living alone by accepting their state of decreased mobility and loss of a loved one, among other factors. The nursing interventions link four main concepts of this model: people, environment, nursing, and health (Braga et al., 2018; Cunha et al., 2019; see Figure 1). Nurses play an important role in creating a relationship among individuals, health, and the environment to prepare individuals to adapt to the life changes in order to improve and maintain the QOL (Akhlaghi et al., 2021).

Lines of Defense

In her system-based model, Betty Neuman described other components: stress, systemic feedback loop, and lines of defenses. Neuman also emphasized that the lines of defense are protective mechanisms that reflect how the individual or system adapts after adjusting to the stressors. These lines of defense include the flexible line of defense, normal line of defense, and lines of resistance (Alligood, 2018).

Flexible Line of Defense

The flexible line of defense is the outer layer, and it is the protective mechanism that surrounds and protects the normal line of defense from invasion by various stressors.

It is dynamic and can be quickly changed in response to these stressors. The relationship of the physiological, spiritual, psychological, socio-cultural, and developmental variables can affect an individual's response to the stressors. It is important that the flexible line of defense be strengthened to prevent possible future damage (Alligood, 2018; McEwen & Wills, 2014).

The Normal Line of Defense

This is the model's middle layer. It reflects a stable state that the individual or system adapts to after the adjustment to stressors. This stability is the result of an individual's lifestyle, coping behaviors, and developmental stage. It becomes a standard for the wellness-deviance determination of clients in the system (Alligood, 2018; McEwen & Wills, 2014).

Lines of Resistance

This is the innermost layer that represents protective mechanisms that are activated when there is a penetration of the normal line of defense due to stressors in the system such as the immune system response to the stressors (Alligood, 2018). According to Neuman (as cited in Alligood), this state symbolizes a movement to an illness on a wellness-illness continuum. However, when there is sufficient energy, the system can be reclaimed by restoring the regular defense line below, at, or above its initial level (Alligood, 2018).

Neuman emphasized that in order to deal with these stressors, different interventions at different levels, such as primary, secondary, and tertiary interventions, are needed. The primary intervention occurs before the system is invaded, the secondary

intervention occurs after the system has been invaded, while the tertiary intervention occurs during the reclamation process (de Almeida et al., 2018).

The stressors that are mainly found in senior people could range between fear, worry, anxiety, and frustration. In addition, a variation in the organic system could also be a source of intrapersonal stressors. Interpersonal stressors also occur between individuals due to various reasons causing relationships strain (de Almeida et al., 2018). According to Neuman, extra personal stressors occur due to external environmental factors which are often found outside the client's boundaries at the proximal range, such as living alone in this study (Alligood, 2018).

Nurses are active contributors in prevention strategy since it is considered one of the most important interventions in protecting the individual while providing care. In this study, primary, secondary, and tertiary interventions through HIP were aimed at equipping the seniors with strategies to tackle the stressors that attempted to attack their lines of defense. Nurses play a pivotal role in taking care of the senior people in society, especially those who are isolated and do not have family or social support. It is important, therefore, for nurses to determine how stressors affect the systems of seniors, ultimately affecting their QOL. The Newman systems model has a broad application in current and future nursing practice. The use of this model by nurses and practitioners can provide wholistic, unified, and goal-oriented client care (Gale, 2020).

CHAPTER 3

METHODOLOGY

This research was a two-group experimental study conducted with pre- and post-test interventions. The study participants included the vulnerable population; therefore, every precaution was taken to keep the participants safe during the study.

PICOT Question

The literature review shows the adverse effects of living alone on senior peoples' overall well-being. Studies indicate that these detrimental effects can be eliminated or minimized through strategies that promote a sense of well-being in this population. Hope-fostering interventions and programs aim to promote overall well-being in a variety of populations and also various settings such as educational centers, therapy, counseling, recreational organizations, and correctional facilities. Studies reveal that hope-fostering interventions enhance psychosocial outcomes and reduce depression. These interventions are aimed at addressing participants' strengths and the strengths they hope to develop more (Larsen et al., 2015; Leontopoulou, 2020). Based on the previous literature findings, the current study PICOT question was developed.

The guiding PICOT question for this study was as follows: In seniors 65 years and older who live alone, how does the implementation of eight-weeks hope intervention compared to seniors 65 years and older who live alone and do not receive the hope

intervention affect the level of hope and quality of life?

Hope Intervention Program

The HIP that the current study implemented was developed by Dr. K. Herth in 2001. The HIP is composed of eight sessions to address four attributes of hope derived from the Hope Process Framework: experiential process, relational process, rational thought process, and spiritual or transcendent process. The HIP was administered over the course of eight weeks where the participants met as a group for a 2-hour session each week (Herth, 2001; see Appendix A). The literature suggests that the length of time must be sufficient (e.g., 7–10 weeks) for the study to be effective and bring changes in the participants which have been shown to continue for a longer time afterward (Herth, 2001). The current study administered this program just as it was administered, over an eight-week period, and evaluated the effects of HIP on the level of hope and QOL in seniors who lived alone.

Project Design

In the current scholarly project for HIP and its effect on the level of hope and QOL in senior people who live alone, a two-group experimental study design was applied. An experimental design was applicable because the participants were randomly assigned to experimental and control groups (Bordens & Abbott, 2008). All qualified participants (see Appendix B) completed Herth Hope Index (HHI) and OPQOL scale both at the inception and again at the end of the eight-week HIP, which was the independent variable applied in order to assess the measure the of level of hope and QOL, the dependent variables. The HIP was then implemented in the form of in-person group

therapy for those who were in the experimental group; during this time, they participated in weekly hope-fostering activities through discussion and hope-engendering exercises. The final phase of the study constituted a post-test to all participants to examine the participants' level of hope and a post-test to re-examine their QOL at the conclusion of the interventions.

Recruitment

For this project, participants were recruited from the local community. Flyers for the project were distributed in local community senior centers, health and wellness clinics, churches, grocery stores, restaurants, and Public Health Department. Prior to the participants' consent, the project manager conducted an informational meeting to introduce the project with the invitation to join the study.

Population and Sample

Population

The population of interest corresponded to elderly participants who lived alone. The sample consisted of elderly participants selected from the general community in Southwest Michigan.

Inclusion Criteria Included

a. Participants 65 years or older
b. Participants who lived alone in their residences
c. Participants who spoke English and were able to read and write English
d. Participants who scored 0-2 on Eastern Clinical Oncology Group (ECOG) performance status screening (see Appendix C)

Exclusion Criteria Included

a. Participants who were bedbound

b. Participants who had any mental illness

Sample/Power Analysis

The study design was developed through consultation with a statistician. A power analysis was conducted in G*Power 3.1.9.7 to determine the minimum sample size requirement (Faul et al., 2014). By applying the use of a mixed model ANOVA and utilizing a medium effect size (f = 0.25), a two-group, a pre-test-post-test comparison, a significance level of .05, and a power of .80, it was determined that a minimum of 34 participants would be sufficient for the data collection (approximately 17 participants in each group), as seen in Figure 2.

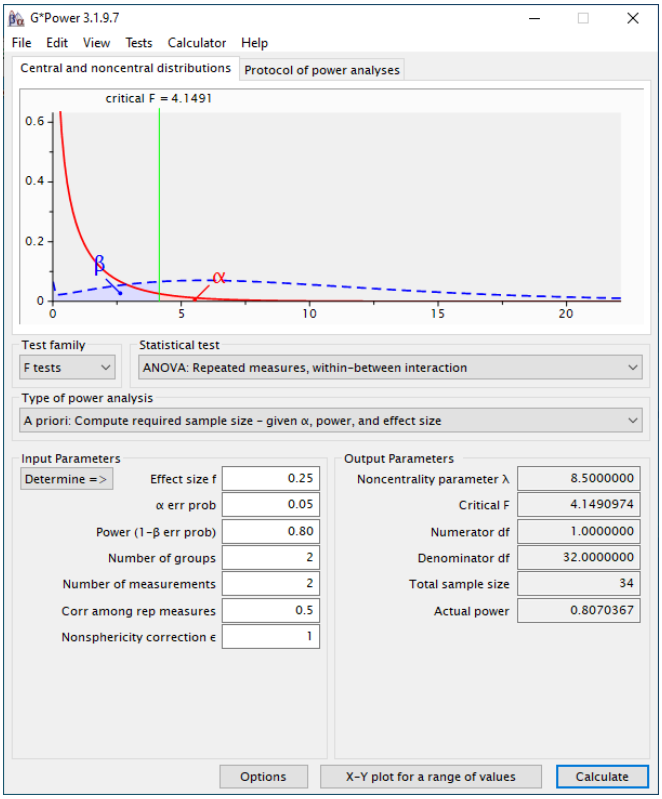

Figure 2. Power analysis for mixed model ANOVA.

Instruments, Interventions, Procedure, and Data Collection

Instruments

The current study utilized two instruments: The HHI and the OPQOL to measure hope and QOL in the selected population.

Herth Hope Index

The HHI (see Appendix D) was developed to assess hope in adults in clinical settings (Herth, 1992). The HHI consists of 12 survey items using a four-point Likert scale ranging from (1 = Strongly Disagree to 4 = Strongly Agree). Permission was granted to administer the HHI from the original author, Dr. Kaye Herth (see Appendix E). The HHI has been translated into a variety of languages. Construct validity has been established with the HHI through the use of an exploratory factor analysis (EFA) with a varimax rotation. The results of the EFA identified a three-factor solution with approximately 61% of the variance being explained by the factors (Herth, 1992). The three factors correspond to an individual's perception of present and future, inner optimistic readiness, and interconnectedness with self and others. Reliability of the scales was established with the Cronbach's alpha test of internal consistency. Cronbach's alpha coefficients for the three scales ranged from .78 to .86. For the purpose of this research, the overall scale for hope was utilized. Scoring consisted of adding the points for the total scale. Hope was a measurable, continuous variable with possible scores ranging from 12-48 points. The higher score indicates a higher level of hope (Herth, 1992).

Older People's Quality of Life Questionnaire Scale

The OPQOL (see Appendix F) is a 35-item survey designed to measure older

populations' QOL. The OPQOL utilizes a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The survey has established both acceptable reliability and validity. Cronbach's alpha test of internal consistency met the acceptable threshold, ranging between .70 and .90 for multiple samples (Bowling, 2009). Convergent validity was established with significant correlations between age, marital status, and QOL. A principal component analysis (PCA) revealed approximately 60.58% of the variance in QOL could be explained by a nine-factor structure (Bowling, 2009). The QOL variable was computed through a composite score of the respective items. Quality of life was a measurable, continuous variable with possible scores ranging from 35-175 points. The higher score reveals higher level of QOL.

Interventions

Group intervention for the experimental group consisted of an 8-session hope intervention protocol adapted from the HIP by Dr. Kaye Herth. The program took place over an eight-week period. Each session was conducted over a 2-hour period. Each session content, activities, and exercises were as follows (Herth, 2001; see Appendix A for more details):

- Session 1: (a) Overview of sessions and (b) getting acquainted exercises.
- Session 2: (a) Discuss the meaning of hope and hope as active waiting, (b) discuss the dialectic relationship between hope and hopelessness, and (c) discuss threats to hope.
- Session 3: (a) Develop a hope mantel and (b) begin a hope journal, tape, or drawing to chronicle one's hope journey.

- Session 4: (a) Discuss the reciprocal/interdependent nature of hope, (b) discuss the role of family and friends in the hope journey, (c) discuss community resources, (d) develop a list of one's hopelets, and (e) develop a hope energy-savers basket.
- Session 5: (a) Discuss and implement value clarification exercises (focus on values thought important and usual sources of strength), (b) discuss and share possible spiritual resources, (c) implement life awareness activities, (d) develop a joy collage, and (e) discuss photos/pictures that represent hope.
- Session 6: (a) Discuss reality surveillance and goal setting as it impacts hope, (b) discuss success mapping, (c) develop a hope kit, (d) discuss and practice a variety of cognitive reframing strategies, and (e) discuss the role of past memories on hope.
- Session 7: (a) Begin a hope memories book, (b) discuss the role of nature in hope, and (c) discuss the value of lightheartedness and how to engender more in one's life (e.g., funny bone exercises).
- Session 8: (a) Share current and potential future use of the hope mantel and the hope journal, tape, or drawing; (b) discuss a hope engendering and maintenance plan; (c) develop a phone, e-mail, or chat room networking system; and (d) complete the program evaluation tool.

Procedure and Data Collection

The procedure for the study was as follows. After the successful proposal defense, Andrews University Institutional Review Board (IRB) approval was obtained (see Appendix G). Invitation flyers (see Appendix H) for the study were placed in the local community senior centers, wellness-clinics, grocery stores, restaurants, and Public Health

Department for 4 weeks prior to the beginning of the study. The purpose of the flyer was to advertise the opportunity of participating in the research study and briefly introduce the study focus. The invitation flyers consisted of project manager's contact information including mobile phone number. Interested participants were asked to contact the project manager by calling the phone number provided on the flyer.

Two weeks before the implementation of the program, a face-to-face interview with participants was conducted at the local wellness clinic. These local clinics were chosen because of their proximity to the center of town. Strict clinic guidelines according to the Health Department were followed during each meeting.

During the initial contact, informed consent (See Appendix I) was obtained after explaining the study and answering participants' questions. The consent form outlined the purpose of the study, inclusion and exclusion criteria, and the estimated time frame for completion of the study. The participants provided consent to continue with the survey process.

Upon providing consent, the participants were directed to the screening for the inclusions criteria of the study. The participants who did not meet the inclusion criteria were removed from the study. Qualifying participants were then asked to respond to a demographic survey (See Appendix J). Following the demographic survey, the HHI survey and OPQOL were administered as pre-tests for the baseline. Assistance was provided as needed to answer and appropriately complete the survey if the participants did not understand the questions.

A random identifier was assigned to each participant. Using the Excel command, RANDBETWEEN, the participants were then randomly assigned to experimental (coded

1) and control groups (coded 0). After the last session of the hope intervention in Week 8, the project manager administered the HHI and OPQOL surveys as post-tests to both experimental and random groups via pen and paper. The post-test responses were matched to the pre-test through the random identifier assigned to each participant. Finally, a token of a $25.00 gift card was given to each participant who completed the study.

Data Analysis Plan

The data were uploaded into the SPSS version 27.0 for Windows. Participants who did not respond to the full HHI and OPQOL questionnaire were removed from further analysis. Frequencies and percentages were used to summarize the demographic variables such as gender and ethnicity. A series of chi-square tests of independence were used to assess for differences in the demographic distribution based on random assignment to treatment and control groups. A chi-square analysis is used when the strength of the relationship between two nominal-level variables are tested (Pallant, 2020). In addition, percentages and frequencies were examined for the most and least helpful intervention activities. Means and standard deviations were used to examine the trends of the continuous-level variables such as the HHI and OPQOL scales. Cronbach's alpha test of internal consistency and reliability were reevaluated for the hope and QOL scales. The strength of the alpha values was interpreted through the use of George and Mallery's (2020) guidelines, in which $\alpha < .5$ Unacceptable, $\alpha > .5$ Poor, $\alpha > .6$ Questionable, $\alpha > .7$ Acceptable, $\alpha > .8$ Good, and $\alpha > .9$ Excellent.

Inferential analyses were used for the research. In order to address the PICOT question, two independent sample *t*-tests were first conducted to analyze for baseline

differences in level of hope and QOL between the experimental and control groups. Two additional independent sample *t*-tests were conducted to analyze for post-test differences in level of hope and QOL between the experimental and control groups. Two mixed model ANOVAs were conducted to assess for differences in hope and QOL before and after the intervention and between the experimental and control groups. A mixed model ANOVA is appropriate when testing for differences in a continuous variable over time and between groups (Pallant, 2020). Before analyzing the data, the assumption of normality was tested with Shapiro-Wilk tests. Homogeneity of variance was tested with Levene's test. The non-parametric Wilcoxon-Signed Rank tests were intended to be conducted to test for differences in hope and QOL between pre-test and post-test if the assumption of normality was not met.

The mixed model ANOVA examined three effects: the within-effect, the between-effect, and the interaction effect. The within-effect tested for differences between pre-test and post-test. The between-effect tested for differences between experimental and control groups. The interaction effect tested for differences over time and between groups, simultaneously. Statistical significance was evaluated at the generally accepted level, $\alpha = .05$.

Ancillary Analysis

A Pearson correlation was conducted to assess the strength of the relationship between hope and QOL. The Pearson correlation was an ancillary test because the analysis was a separate examination from the PICOT question and the mixed model ANOVA. A Pearson correlation is appropriate when testing the strength of the association between two continuous-level variables (Pallant, 2020). Prior to analysis, the assumptions

of normality and linearity were tested on the data. Linearity was visually assessed with a scatterplot between hope and QOL. If the assumptions were not supported, a non-parametric Spearman correlation was planned to be conducted as an alternative.

The Pearson or Spearman correlation coefficients can range from 0 (no relationship) to +1 (perfect positive linear relationship) or -1 (perfect negative linear relationship). Positive correlation coefficients reveal a direct association, meaning that as one variable increases, the other variable also shows improvement. Negative correlation coefficients identify an inverse relationship: as one variable increases, the other variable decreases. Cohen's standard (Cohen, 1988) was used to evaluate the correlation coefficient to determine the strength of the relationship where coefficients above .50 represent a large association; coefficients between .30 and .49 represent a medium association; and .10 and .29 represent a small association.

Confidentiality

Confidentiality was ensured by randomly identifying the participants without using their personal identifying information. The study assigned a random identifier to each participant through the use of the Excel command, RANDBETWEEN, to administer the surveys and collect the data. All the information was placed in a secure place accessible only with a secure password by the project manager. The data will be kept for 5 years and then will be destroyed from both computer and external hard drives.

Project Timeline

Table 1 below outlines the timeline of the project from its commencement to its end.

Table 1

Project Timeline

Timeline Dates	**Events**
April 4th-April 21st, 2022	Recruiting process. Demographic, ECOG surveys/Pre-tests (HHI & OPQOL) data collection.
April 25th-April 28th, 2022	**Session 1:** Building a sense of community. Introduction to the program, getting acquainted with HIP exercises.
May 3rd-May 4th, 2022	**Session 2:** Searching for hope/experimental process. Discuss meaning of hope and identify areas of hope in life.
May 9th-May 11th, 2022	**Session 3:** Searching for hope/discuss threats to hope. Develop a hope mantel and begin a hope journal (see Appendix A).
May 16th-May 18th, 2022	**Session 4:** Connecting with others/relational process. Discuss the role of family & friends. Discuss community resources.
May 23rd-May 25th, 2022	**Session 5:** Expanding the boundaries. Spiritual/transcendent process. Discuss value clarification exercises. Share possible spiritual resources. Develop joy collage.
May 30th-June 1st, 2022	**Session 6:** Building the hopeful veneer/rational thought process. Discuss cognitive reframing strategies, role of hope in past memories. Develop hope kit.
June 7th-June 8th, 2022	**Session 7:** Building the hopeful veneer. Discuss the role of nature and lightheartedness
June 13th-June 15th, 2022	**Session 8:** Reflecting and evaluating. Post-test data collection. Project evaluation. Gift-card given with thanks.
August-November, 2022	Analysis and write up

CHAPTER 4

RESULTS

The purpose of this project was to evaluate the effects of a non-pharmacological intervention, in this case, the utilization of hope interventions on hope and on the QOL in senior people who live alone. In this chapter, the findings of the data analyses are presented. Frequencies and percentages were used to describe trends in the demographic data. Cronbach's alpha test of reliability was used to evaluate the internal consistency of the measures. To address the PICOT question, two mixed model ANOVAs were conducted to evaluate for differences in level of hope and QOL following the intervention. Ancillary analyses were conducted to test for the relationship between level of hope and QOL.

Data Collection

After receiving approval from Andrews University IRB, a total of 200 project invitation flyers (see Appendix H) for the study were sent out and placed in the local community senior centers, wellness-clinics, grocery stores, restaurants, and Public Health Department for 4 weeks prior to the beginning of the study. A total of 43 individuals from the general community in Southwest Michigan approached the project manager to learn more about the research project and to participate in the study. Nine individuals declined to take part in the study after learning the length of the program. Thirty-four participants

decided to enroll in the project and signed the informed consent.

During the initial screening, three participants were excluded from the study. Of those three participants, two individuals did not meet the criteria for living alone. One participant was 64 years old, which was lower than the inclusion criteria for being at least 65 years old. A total of 31 participants completed the demographic and pre-test HHI and OPQOL surveys using the pen and paper. The Excel command, RANDBETWEEN, was used to randomly assign participants to the experimental or control groups. The RANDBETWEEN function works by randomly selecting an integer between two numbers. Using this command, study adults were randomly assigned to experimental (coded 1) and control groups (coded 0). After pre-test data collection, participants in the control group were asked to return after 8 weeks to complete the post-test. I recorded the pre-test survey scores electronically on the Excel spreadsheet.

The experimental group consisted of 16 participants and the control group consisted of 15. However, three individuals from the experimental group did not complete the intervention in its entirety and only attended part of the program. Two additional participants dropped out of the intervention program due to illness. Thus, these participants were excluded from the final data analysis. Three participants from the control group did not return to complete the post-test, so they were excluded from the final data analysis (see Figure 3).

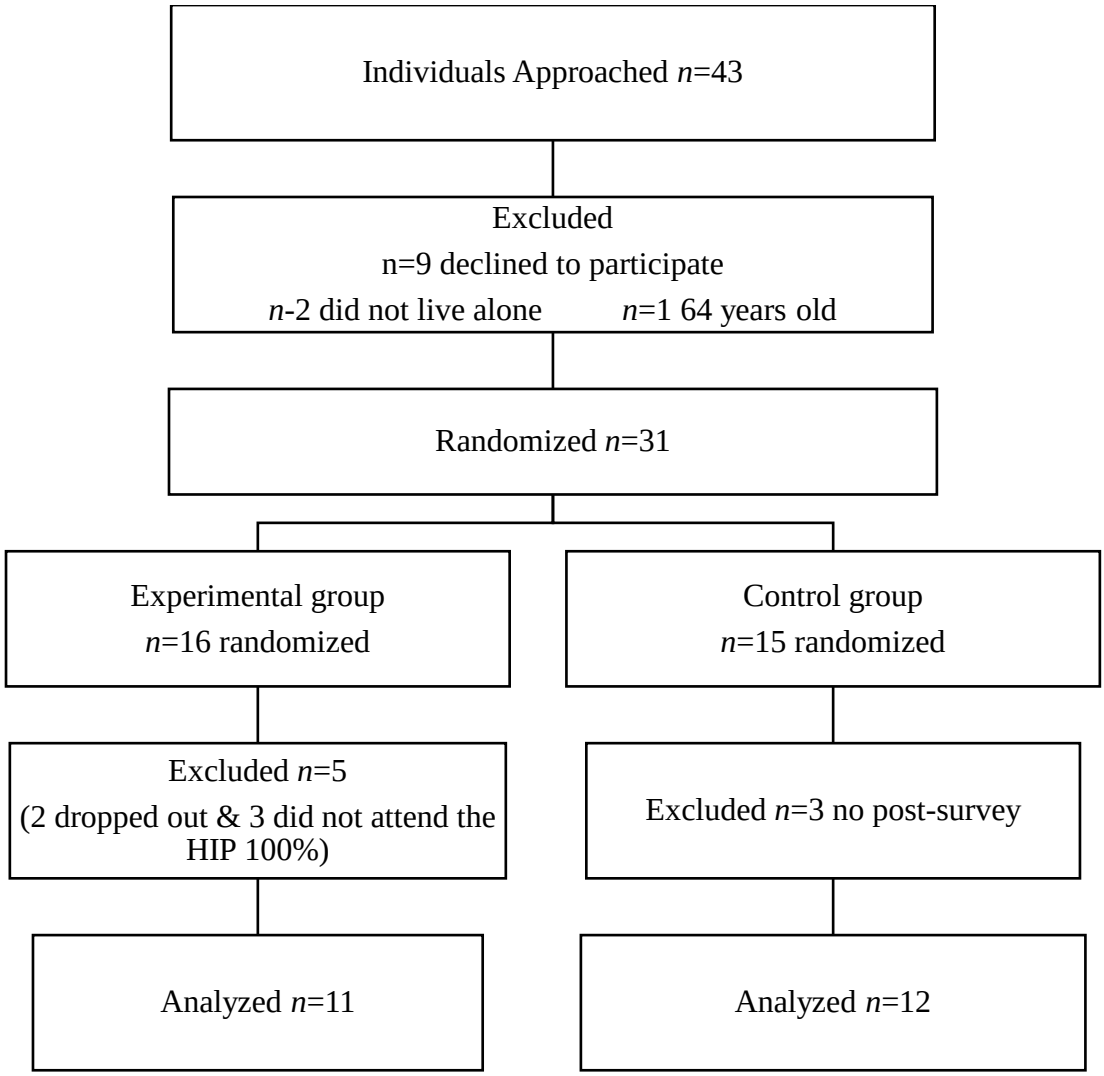

Figure 3. Participant flow chart.

Data Analysis

Frequencies and percentages were used for the nominal variables. Chi-square tests were conducted to examine the strength of the relationships of the nominal-level variables by experimental and control groups. There were no statistically significant differences in the demographic variables between the two groups. The age variable was not listed because the participants were recruited based on whether participants' age was

65 or higher or not. The finding of the chi-square test between ECOG and group was statistically significant, $\chi^2(2) = 7.11$, $p = .029$. Table 2 presents the findings of the cross-tabulations. Figure 4 provides details of participants in both groups for ECOG.

Table 2

Cross-Tabulation between Nominal Variables and Group

Variable	Group		χ^2	*p*
	Experimental (*n* = 11)	Control (*n* = 12)		
Gender			0.96	.328
Male	0 (0.00%)	1 (8.33%)		
Female	11 (100.00%)	11 (91.67%)		
Ethnicity			0.01	.949
Black or African American	1 (9.09%)	1 (8.33%)		
White	10 (90.91%)	11 (91.67%)		
Marital Status			1.29	.524
Single	1 (9.09%)	0 (0.00%)		
Divorced	5 (45.45%)	5 (41.67%)		
Widowed	5 (45.45%)	7 (58.33%)		
Educational Level			1.05	.592
High school graduate	6 (54.55%)	5 (41.67%)		
College graduate	4 (36.36%)	4 (33.33%)		
Graduate	1 (9.09%)	3 (25.00%)		
ECOG			7.11	.029
(0) Fully active	3 (27.27%)	9 (75.00%)		
(1) Restricted in physical strenuous activity	4 (36.36%)	3 (25.00%)		
(2) Able to ambulate & self-care but unable to perform work activities	4 (36.36%)	0 (0.00%)		

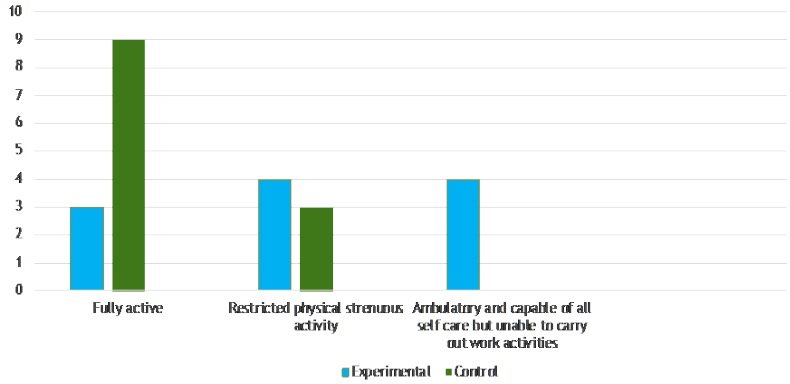

Figure 4. Number of participants in both groups for ECOG Scores 0-2.

Cronbach's Alpha Test of Internal Consistency and Reliability

Composite scores were calculated for hope and QOL through use of the HHI and OPQOL, respectively. Cronbach's alpha test of reliability and internal consistency were evaluated for the two scales. The strength of the alpha values was interpreted through the guidelines developed by George and Mallery (2020), in which $\alpha < .5$ Unacceptable, $\alpha \geq .5$ Poor, $\alpha \geq .6$ Questionable, $\alpha \geq .7$ Acceptable, $\alpha \geq .8$ Good, and $\alpha \geq .9$ Excellent. Hope and QOL met the acceptable level of internal consistency ($\alpha > .70$) for both pre-test and post-test measurements. This indicated that the participants answered the survey questions in a consistent manner. Table 3 presents the findings of Cronbach's alpha test of reliability.

Table 3

Cronbach's Alpha Test of Reliability

Variable	Number of items	α
Hope		
Pre-test	12	.91
Post-test	12	.83
QOL		
Pre-test	35	.95
Post-test	35	.92

PICOT Question

How does the implementation of an eight-week hope intervention in seniors 65 years and older who live alone affect their level of hope and quality of life compared to those levels in seniors 65 years and older who live alone and do not receive the hope intervention?

In order to address the PICOT question, two independent sample *t*-tests were first conducted to analyze for pre-test differences in the level of hope and QOL between the experimental and control groups. Two additional independent sample *t*-tests were conducted to analyze for post-test differences in the level of hope and QOL between the experimental and control groups. Two mixed model ANOVAs were conducted to assess for differences in hope and QOL before and after the intervention and between the experimental and control groups. A mixed model ANOVA is appropriate when analyzing for differences in a continuous level variable over time and by group (Tabachnick & Fidell, 2019). Prior to analysis, the assumptions of normality and homogeneity of variances were tested on the data.

Normality Assumption: Shapiro-Wilk Tests

A series of Shapiro-Wilk tests was used to assess the normality assumption. The normality of assumption reveals that the data falls in a normal distribution, which is an important factor in using parametric analysis (Mishra et al., 2019). The findings of the Shapiro-Wilk tests were not statistically significant for hope at post-test (p =.512), and QOL at pre-test (p = .075) and post-test (p = .822); therefore, the assumption of normality was supported for these variables. This finding indicates that these variables approximately follow a bell-shaped distribution, which is one of the assumptions for parametric analysis. The finding of the Shapiro-Wilk test was statistically significant for hope at pre-test (p = .017), indicating that the assumption of normality was not supported for this variable. This finding indicates that the distribution of scores for hope at pre-test did not resemble a bell-shaped curve. Table 4 presents the findings of the Shapiro-Wilk tests.

Table 4

Shapiro-Wilk Tests on Hope and QOL (n = 23)

Variable	Shapiro-Wilk Tests	
	Test Statistic	*p*
Hope		
Pre-test	0.89	.017
Post-test	0.96	.512
QOL		
Pre-test	0.92	.075
Post-test	0.98	.822

Homogeneity of Variance Assumption: Levene's Tests

A series of Levene's tests was used to assess the homogeneity of variance assumption, which is one of the assumptions for parametric analysis. Homogeneity of variances is an assumption in which the population variances of two or more samples are considered equal. The findings of the Levene's tests were not statistically significant for hope at pre-test (p = .499) and post-test (p = .839), and QOL at post-test (p = .513); therefore, the assumption of homogeneity of variance was supported for these variables. The finding of the Levene's test was statistically significant for QOL at pre-test (p = .042), indicating that the assumption of homogeneity of variance was not supported for this variable. Due to the assumption of normality not being supported for hope at pre-test and homogeneity of variance not being supported for QOL at pre-test, a series of non-parametric Wilcoxon-Signed Rank tests were used as a follow-up to the mixed model ANOVAs. Table 5 presents the findings of the Levene's tests.

Table 5

Levene's Tests on Hope and QOL (n = 23)

Variable	Levene's Tests	
	Test Statistic	*p*
Hope		
Pre-test	0.47	.499
Post-test	0.04	.839
QOL		
Pre-test	4.69	.042
Post-test	0.44	.513

Independent Sample *t*-tests: Pre-test

Independent sample *t*-tests were used to examine for pre-test differences between experimental and control groups. The independent sample *t*-tests for hope (t = -1.60, p = .125) and QOL (t = -1.72, p = .100) were not statistically significant, indicating that at pre-test, there were no significant differences in scores between experimental and control groups. Table 6 presents the findings of the independent sample *t*-tests for pre-test hope and QOL scores.

Table 6

Independent Sample t-tests for Hope and QOL at Pre-test

Variable	Experimental			Control				
	n	*M*	*SD*	*n*	*M*	*SD*	*t*(21)	*p*
Hope pre-test	11	37.45	7.24	12	41.50	4.76	-1.60	.125
QOL pre-test	11	114.91	12.17	12	126.25	18.49	-1.72	.100

Independent Sample *t*-tests: Post-test

Independent sample *t*-tests were used to examine for post-test differences between experimental and control groups. The independent sample *t*-tests for hope (t = -0.51, p = .618) and QOL (t = -1.34, p = .194) were not statistically significant, indicating that at post-test there were no significant differences in scores between experimental and control groups. Table 7 presents the findings of the *t*-tests for post-test hope and QOL scores.

Table 7

Independent Sample t-tests for Hope and QOL at Post-test

Variable	Experimental			Control				
	n	*M*	*SD*	*n*	*M*	*SD*	*t*(21)	*p*
Hope post-test	11	40.91	4.39	12	41.83	4.37	-0.51	.618
QOL post-test	11	134.09	15.70	12	142.42	14.04	-1.34	.194

Mixed Model ANOVA: Hope

The findings of the within-subjects effect, time (pre-test vs. post-test), were not statistically significant, $F(1, 21) = 2.50$, $p = .129$, $\eta_p^2 = .106$, indicating that there were no significant differences in hope before and after the intervention. Within-subjects is the pre-test/post-test comparison, so both experimental and control groups were merged for this comparison. Approximately 10.6% of the variance in hope scores can be explained by the time factor. For the overall sample ($n = 23$), mean hope scores before and after the intervention were 39.57 and 41.39, respectively.

The findings of the between-subjects effect, group membership (experimental vs. control), were not statistically significant, $F(1, 21) = 1.79$, $p = .195$, $\eta_p^2 = .079$, indicating that there were no significant differences in hope between experimental and control groups. Between-subjects looked at group comparison, so all pre-test and post-test were merged for this comparison. Approximately 7.9% of the variance in hope scores can be explained by the group factor. The mean hope scores for the experimental and control groups were 39.18 and 41.67, respectively.

The findings of the interaction effect (time*group) were not statistically significant, $F(1, 21) = 1.70$, $p = .207$, $\eta_p^2 = .075$, indicating that there were no significant

differences in hope by the combination of the time and group. The interaction effect analyzed pre-test experimental, pre-test control, post-test experimental, and post-test control. For the experimental group, the mean hope scores before and after the intervention were 37.45 and 40.91, respectively. Approximately 7.5% of the variance in hope scores can be explained by the interaction effect, time*group. For the control group, the mean hope scores before and after the intervention were 41.50 and 41.83, respectively.

Table 8 presents the results of each effect for the mixed model ANOVA. The means and standard deviations for hope scores over time and by group are presented in Table 9. Figure 5 presents a line plot for hope scores over time and by group.

Table 8

Mixed Model ANOVA for Hope Scores by Time and Group

Source	$F(1, 21)$	p	η_p^2
Within-subjects effect (Time: Pre-test vs. Post-test)	2.50	.129	.106
Between-subjects effect (Group: Experimental vs. Control)	1.79	.195	.079
Interaction effect (Time*Group)	1.70	.207	.075

Table 9

Means and Standard Deviations for Hope Scores by Time and Group

Source	Experimental			Control			Total		
	n	*M*	*SD*	*N*	*M*	*SD*	*n*	*M*	*SD*
Hope (Pre-test)	11	37.45	7.24	12	41.50	4.76	23	39.57	6.28
Hope (Post-test)	11	40.91	4.39	12	41.83	4.37	23	41.39	4.30
Total	11	39.18	5.82	12	41.67	4.57			

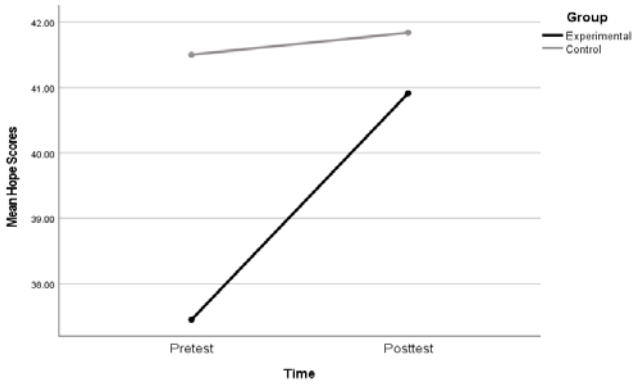

Figure 5. Line plot for hope scores over time and by group.

Mixed Model ANOVA: QOL

The findings of the within-subjects effect, time (pre-test vs. post-test), were statistically significant, $F(1, 21) = 105.51$, $p < .001$, partial $\eta_p^2 = .834$, indicating that there were significant differences in QOL before and after the intervention. Approximately 83.4% of the variance in QOL scores can be explained by the time factor. This finding indicates that for the combined sample (experimental and control group), there was a significant improvement in QOL. For the overall sample ($n = 23$), mean QOL scores before and after the intervention were 120.83 and 138.43, respectively.

The findings of the between-subjects effect, group membership (experimental vs. control), were not statistically significant, $F(1, 21) = 2.55$, $p = .126$, $\eta_p^2 = .108$, indicating that there were no significant differences in QOL between experimental and control groups. Approximately 10.8% of the variance in QOL scores can be explained by the group factor. The mean QOL scores for the experimental and control groups were 124.50 and 134.34, respectively.

The findings of the interaction effect (time*group) were not statistically significant, $F(1, 21) = 0.77$, $p = .391$, $\eta_p^2 = .035$, indicating that there were no significant

differences in QOL by the combination of the time and group. For the experimental group, the mean QOL scores before and after the intervention were 114.91 and 134.09, respectively. Approximately 3.5% of the variance in QOL scores can be explained by the interaction effect, time*group. For the control group, the mean QOL scores before and after the intervention were 126.25 and 142.42, QOL scores over time and by group are presented in Tables 10 and 11. Figure 6 presents a line plot for QOL scores over time and by group.

Table 10

Mixed Model ANOVA for QOL Scores by Time and Group

Source	$F(1, 21)$	p	η_p^2
Within-subjects effect (Time: Pre-test vs. Post-test)	105.51	<.001	.834
Between-subjects effect (Group: Experimental vs. Control)	2.55	.126	.108
Interaction effect (Time*Group)	0.77	.391	.035

Table 11

Means and Standard Deviations for QOL Scores by Time and Group

Source	Experimental			Control			Total		
	n	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*
QOL (Pre-test)	11	114.91	12.17	12	126.25	18.49	23	120.83	16.49
QOL (Post-test)	11	134.09	15.70	12	142.42	14.04	23	138.43	15.12
Total	11	124.50	13.94	12	134.34	16.27			

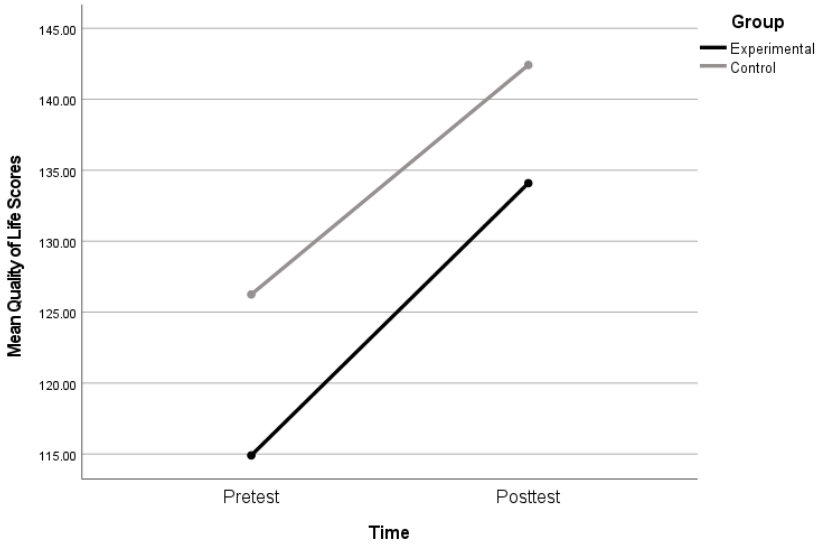

Figure 6. Line plot for QOL scores over time and by group.

Wilcoxon-Signed Rank Tests for Hope and QOL

A series of Wilcoxon-Signed Rank tests was conducted as non-parametric follow-ups because the assumption of normality and homogeneity of variance assumptions were not supported, which were essential for parametric analysis. Instead of using the mean to calculate for the pre- and post-hope level and QOL, a series of Wilcoxon-Signed Rank Tests used the median to calculate pre-test and post-test hope and QOL. For the experimental groups, there was a significant improvement in hope (p = .034) and QOL (p = .003) following the intervention. The control group also demonstrated a significant increase in QOL. Table 12 presents the findings of the Wilcoxon-Signed rank tests.

Table 12

Wilcoxon-Signed Rank Tests for Hope and QOL Before and After Intervention

Source	Pre-test	Post-test		
	Median	*Median*	Wilcoxon-Signed Rank Test Statistic	*p*
Hope				
Experimental	38.00	40.00	-2.12	.034
Control	42.00	42.00	-0.28	.783
QOL				
Experimental	113.00	135.00	-2.94	.003
Control	126.50	141.50	-2.99	.003

Ancillary Analysis

Spearman correlations were conducted to analyze the strength of the relationship between hope and QOL. Spearman correlations were conducted instead of Pearson correlations because the normality assumption was not supported for hope scores at pre-test. In addition, homogeneity of variance was not supported for QOL scores at pre-test. Scatterplots for the relationships at pre-test and post-test are presented in Figures 7 and 8. Both scatterplots appeared to depict positive associations between hope and QOL.

The finding of the Spearman correlation between hope and QOL at pre-test was statistically significant ($r_s = .64$, $p < .001$). The finding of the Spearman correlation between hope and QOL at post-test was also statistically significant ($r_s = .74$, $p < .001$). The correlation coefficients were positive and represented a large effect ($r \geq .50$). Table 13 presents the findings of the Spearman correlations.

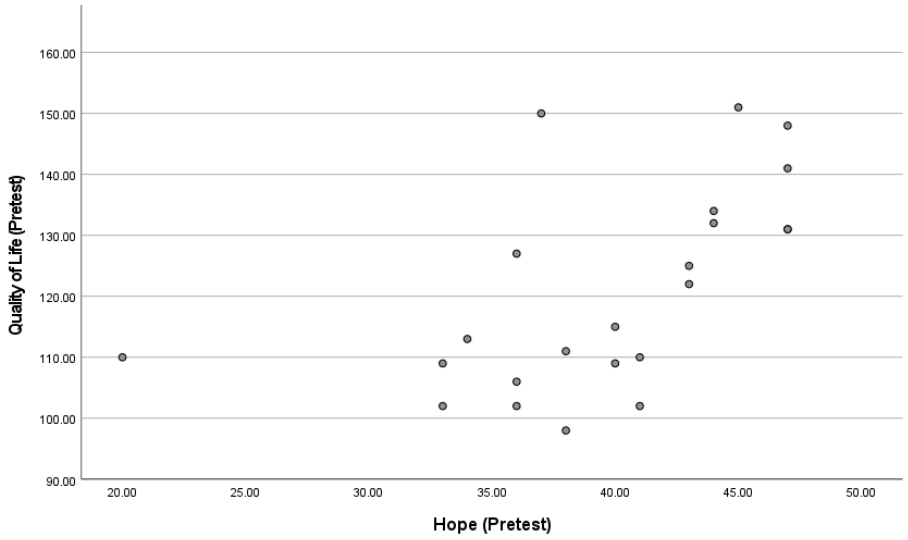

Figure 7. Scatterplot between hope and QOL at pre-test.

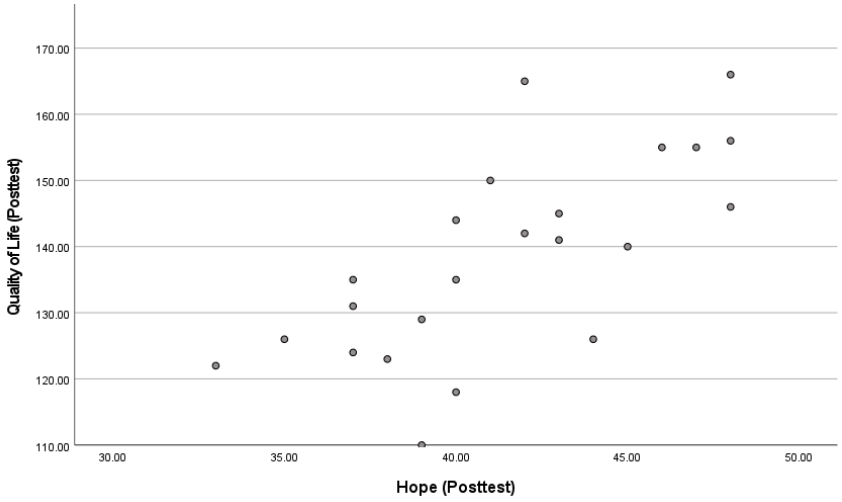

Figure 8. Scatterplot between hope and QOL at post-test.

Table 13

Spearman Correlations between QOL and Hope

Variable	QOL (pre-test)	QOL (post-test)
	r_s	r_s
Hope (pre-test)	.64*	
Hope (post-test)		.74*

*Denotes correlation is significant at .001 level.

Summary

The demographic analysis indicated that there were no statistically significant differences in the demographic variables between the two groups except for ECOG. Results showed that there was, however, a statistically significant difference between ECOG and group ($p = .029$). Independent sample *t*-tests conducted to examine for pre-test differences between experimental and control groups showed no statistical significance for hope ($t = -1.60$, $p = .125$) and QOL ($t = -1.72$, $p = .100$). Independent sample *t*-tests performed to examine for post-test differences between experimental and control groups indicated no significant differences for hope ($t = -0.51$, $p = .618$) and QOL ($t = -1.34$, $p = .194$). Mixed model ANOVA for hope showed no significant findings. Mean hope scores for the experimental group before and after the interventions were 37.45 and 40.91, respectively, indicating that there was some increase in hope level in the experimental group before and after the intervention, but it was not statistically significant. Mixed model ANOVA for QOL indicated that there were significant differences in both groups before and after the intervention $F(1, 21) = 105.51$, $p < .001$. Wilcoxon-Signed Rank tests conducted as back-up for the parametric revealed that there was a significant improvement in hope ($p = .034$) and QOL ($p = .003$) following the intervention. Spearman correlations conducted to analyze the strength of the relationship between hope and QOL depicted positive associations between hope and QOL.

CHAPTER 5

DISCUSSION

There is now an increasing senior population across the world. This will soon surpass that of children, thus leading to a majority that is old or very old (Zarghami et al., 2018). Studies indicate that the number of elderly people living alone continues to grow (Ng et al., 2015). Living alone has also shown to affect the wellbeing of the elderly population, impacting their hope and QOL (Gupta & Singh, 2020; Hwang et al., 2020; Yeh & Lo, 2004).

The main objective of this project was to determine whether an 8-week Hope Intervention Program would improve the levels of hope and QOL in elderly people who lived alone. This chapter includes discussion of the major findings of the study and their relationship to the objectives and the theoretical framework. In addition, the chapter includes discussions of the project's significance and its impact on future nursing practice and nursing research. Furthermore, study strengths, limitations, and plans for dissemination are described, as well as how the project relates to the *Doctor of Nursing Practice (DNP) Essentials* as defined by the American Association of Colleges of Nursing ([AACN], 2006).

Summary of Study Findings

The purpose of this project was to evaluate the effects of a non-pharmacological

intervention, in this case, the use of HIP on hope and on the QOL in senior individuals who live alone. To the project manager's knowledge, this study was the first which utilized HIP to explore the levels of hope and QOL in the elderly population.

Participants' Demographics

The population for this project was drawn from the general community in Southwest Michigan. Thirty-one individuals from Southwest Michigan originally signed the informed consent to participate in the study. A final total of 23 participants completed the study—11 participants in the experimental group and 12 participants in the control group.

There were no statistically significant differences pertaining to demographic variables between the experimental and control groups except for ECOG scores. It was observed that the majority participants in the study were white. There was one black participant in the experimental group and one in the control group, and no Hispanics represented in the study. There was an under-representation of male participants in the study—they were all female except for one male participant. These findings are consistent with Berrien County demographics. According to the U.S. Census Bureau (2021), Berrien County Demographics Summary showed that the largest Berrien County racial/ethnic groups are White 79.9% followed by Black 14.4% and Hispanic 6.1%. U.S. Census Bureau also indicated that the Berrien County, Michigan Gender Ratio was 50.7% females to 49.3% male. There was no statistically significant difference in the marital status or education level between both groups. The study recruited participants based on whether their age was 65 or higher. Therefore, no age range data was available.

The ECOG score was statistically significant between the two groups. It showed

that more participants in the experimental group reported restricted activity levels compared to the control group. A total of four (36.36%) participants in the experimental group reported that they were able to ambulate and do self-care, but were unable to carry out work activity, while none in the control group reported that they were restricted with work activities. While three (27.27%) participants in the experimental group said they were fully active, nine (75%) participants in the control group reported that they were fully active. These factors may have influenced the final results since individuals who remain active tend to have a positive outlook towards life (Lucas et al., 2019).

Hope Level Analysis

The HHI survey was utilized to assess the baseline for the level of hope for both the experimental and control groups. The survey was completed by both groups at the end of the eight weeks. Independent sample *t*-tests conducted to examine for pre-test differences between the experimental and control groups showed no statistical significance for pre-test hope ($t = -1.60$, $p = .125$). The results also indicated that the independent sample *t*-tests for post-test hope ($t = -0.51$, $p = .618$) was not statistically significant. This showed that there was no significant difference on the level of hope after the HIP intervention between the experimental and control groups.

Zareei Mahmoodabadi et al. (2019) indicated that the hope therapy program conducted on 24 elderly women showed a statistically significant difference in the level of hope before and after the intervention in the study group. According to Herth (2001), HIP positively influenced in rebuilding and maintaining hopeful veneer in 38 participants with first-time recurrent cancer who were receiving cancer treatment. Hence, it was expected that hope interventions would reveal a similar effect in the current study.

The findings in the current research led me to identify that other variables may have had an impact on the results such as sample size, ECOG scores, and social desirability bias. The project manager noted sample size and how it may have played a role influencing the results as one of the variables. The assumption of normality was not supported for the hope variable at pre-test as indicated by the Shapiro-Wilk test, which showed a statistical significance for hope at pre-test ($p = .017$), meaning the collected data for hope at pre-test did not resemble a normal distribution, which was essential for parametric analysis. The literature indicates that as the sample size decreases, sufficient power is not guaranteed to affect the results. To confirm the power in the normality test, it is essential to obtain an adequate sample (Kim & Park 2019). Howell (2013) revealed that when the sample size is greater than 50 cases, violations of normality are not problematic. Thus, 50 cases is the target where normality violations are not problematic. The sample size was a limitation for all analyses. This situation may play a role in influencing the post-hope level as not being significant between experimental and control groups despite the HIP intervention in the experimental group.

The project manager observed another variable that may have influenced the findings—ECOG scores between both groups. The current study finding of the chi-square test between ECOG and group was statistically significant, $\chi^2(2) = 7.11$, $p = .029$. The current study experimental group had a greater level of impairment reflected by ECOG scores, compared to the control group (see Table 2), indicating that the participants in the control group were more active with better ability to care for themselves than the participants in the experimental group. The significant difference on ECOG between groups may contribute to the insignificance in the pre- and post-hope level.

The project manager also noted that social desirability bias in the self-reported surveys could have influenced the results. Some participants in the experimental group said during some of the sessions that they may have reported high scores for the pre-tests because they did not want to be seen as less hopeful in life, thereby answering in ways that put them in a more positive light, rather than answering honestly. Social desirability bias refers to the research participants' tendency to select responses that they believe are more socially desirable or acceptable rather than selecting responses that reflect true feelings and thoughts (Krumpal, 2013). The literature shows that selecting appropriate data collection strategies that can reduce respondents' uneasiness when answering a sensitive question may minimize this bias and generate more valid data (Krumpal, 2013). Strategies such as techniques to introduce the study, asking questions, establishing rapport, collecting data in an environment that allows for privacy, and, when possible, collecting data through mail surveys rather than face-to-face or telephone interviews have shown to reduce the social desirability bias (Bergen & Labonté, 2020). The current participants voiced social desirability bias may have influenced the results.

In addition, current study findings showed that the mean hope score at pre-test for the experimental group was lower (37.45) compared to the hope scores at pre-test for the control group (41.50), indicating that the difference in hope already existed between the two groups. Therefore, the significant differences on hope level before the intervention indicated that the hope level was not equally distributed between two groups. This unequal distribution on pretest hope may contribute to the insignificant results after the intervention for the participants between two groups. In addition, participants in the experimental group received 8 weeks HIP, and participants in the control group might

also have gone to the wellness clinic and senior center for individual visits. Therefore, the hope level may also have improved in the control group after 8 weeks, resulting in the insignificance of posttest hope between the two groups.

QOL Level Analysis

The current study results also revealed that the independent sample *t*-tests for QOL were not statistically significant at pre-test (t = -1.72, p = .100) and post-test (t = -1.34, p = .194), indicating no significant differences at post-test in scores between experimental and control groups. In the previous literature, improved perception and understanding of hope through hope intervention has shown to increase the QOL among the elderly (Zareei Mahmoodabadi et al., 2019). Another study conducted by Binaei et al. (2016) showed that hope-promoting strategies were beneficial in improving the QOL in people with chronic conditions. The current study results did not reflect the previous study findings. As noted with hope level results analysis, other variables such as smaller sample size, ECOG scores, and social desirability bias may have contributed to the result of no statistically significant differences with QOL before and after the interventions.

The finding of the Levene's test was statistically significant for QOL at pre-test (p = .042), indicating that the assumption of homogeneity of variance was not supported for this variable plays a role influencing the post QOL result. This may contribute to the QOL as not significant in post-test. Homogeneity of variance, which is essential for both *t*-tests and F tests analysis, refers to the assumption in which the population variances of two or more samples are considered equal. The literature shows that the smaller sample size greatly influences the values of individual samples on variance. As the sample size increases, this variability becomes stable (Kim & Park 2019; Uttley, 2019)

Even though the independent sample *t*-tests for QOL were not statistically significant, a mixed model ANOVA for QOL within-subjects effect showed statistically significant differences, indicating that there were significant differences in QOL before and after the intervention for all participants in both the experimental and control groups. Therefore, some of the reasons may be because participants in the experimental group received 8 weeks HIP and participants in control group might also have gone to the wellness clinic and senior center for individual visits. Therefore, the QOL were all improved in all participants due to socialization and human interactions.

Hope and QOL

Even though the independent sample *t*-tests for hope were not statistically significant, the mixed model ANOVA showed that the mean hope scores in the experimental group was increased from 37.45 (pre-hope) to 40.91 (post-hope) in the experimental group as compared to the control group—41.50 (pre-hope) to 41.83 (post-hope; see Table 9). The line plot for hope scores revealed a positive impact on the experimental group as noted in Figure 5. Instead of using the mean to calculate for the pre- and post-hope level, a series of Wilcoxon-Signed Rank Tests used the median to calculate pre-test and post-test hope. The findings indicated that there was a significant improvement in hope (p=0.034) after the intervention (see Table 12). This result showed that HIP had a positive impact on hope perception in participants in the experimental group.

Even though the independent *t*-tests did not indicate significant improvement in QOL, the mixed model ANOVA for the pre- and post-QOL score of within-subject for all participants was significantly different. In other words, the QOL scores were improved

for all participants in both the experimental and control group. The QOL score increased from 114.91 to 134.09 in the experimental group. The QOL score also increased from 126.25 to 142.42 in the control group (see Table 11). In the line plot, improvement was indicated in both groups (see Figure 6). A series of Wilcoxon-Signed Rank Tests used the median instead of the mean to calculate pre-test and post-test QOL. It indicated that there was a significant improvement in QOL in both experimental (p=0.003) and control (p=0.003) groups (see Table 12). This result showed that HIP had a positive impact on QOL perception in participants in the experimental group. However, for the participants in the control group, their improvement in QOL may be because of the frequent visits to the wellness clinic for their own purpose or people interactions in the wellness clinic, as well. Still, for the participants in the experimental group, HIP may have had a positive influence on the QOL outcome.

The study results showed positive associations between hope and QOL as noted in Figures 7 and 8. Hope is an essential factor that strengthens both physiological and psychological defenses leading to an improved level of QOL (Herth, 2001). Studies indicated that there is a positive relationship between the level of hope and QOL (Alshraifeen et al., 2020; Shen et al., 2020).

In the United States, there is an increasing number of senior individuals who live alone and present adverse health effects associated with aging (Marcus-Varwijk et al., 2019). Sickness is a disease condition that can affect body, mind, and spirit. Hope plays a crucial part with coping and healing. Studies indicate that hope interventions can benefit individuals by rebuilding and maintaining a hopeful outlook towards life (Chi, 2007; Herth, 2001; Salamanca-Balen et al., 2021). The results of the current study are

consistent with the literature findings that there are positive associations between hope and QOL.

Implications for Practice

Evidence-based approaches are essential in nursing practice to provide quality care through improved education and treatment modalities. This was designed to examine whether elderly people who live alone could benefit from the Hope Intervention Program. Betty Neuman's systems model which holds that individuals should be treated holistically, provided the theoretical underpinning for this study.

Neuman viewed the person as an open system with physiological, developmental, sociocultural, psychological, and spiritual variables. The system is protected by a series of concentric rings. Stressors, which may be interpersonal or environmental, have the potential of penetrating the normal line of defense when it offers inadequate protection and disturb the wellness of the client (Alligood, 2018). Interventions should focus on the relief of and protection from stressors (Butts & Rich, 2015; de Almeida et al., 2018). The Hope Intervention Program consisted of interventions that incorporated education and activities to address the four attributes of hope to meet and improve the social, emotional, spiritual, and rational needs of patients, ideally leading to an increased level of hope and improved QOL (Herth, 2001).

Current findings showed that individuals who participated in the program showed some improvement in their levels of hope and QOL according to A Line Plot (Figures 5 and 6) and Wilcoxon-Signed Rank tests (Table 12), even though they were not statistically significant according to the independent *t*-tests (Tables 6 and 7). This points to the observation that HIP led to some positive trending in improving hope and QOL

levels. Because hope and QOL are multidimensional (Soósová, 2016), nurses may need to collaborate with other healthcare professionals to treat the individual as a whole person. Approaches that focus on empathy, encouragement, interactions with family and friends, appreciation for nature, involvement in the community activities, and gratitude, for example, are shown to be effective in improving hope and QOL in seniors living alone (Herth, 2001).

The HIP could be incorporated in the curriculum for health professionals as one of the interventions to increase hope and QOL in elderly people. School systems could work with local senior centers and local governmental agencies to connect students with seniors in local communities and develop a buddy system where students can interact with seniors regularly to improve their outlook toward life and have a positive impact on the community.

Project Strengths

There were not many studies done on seniors living alone regarding this topic and HIP. This project sought to fill the needs of the growing elderly population who live alone in order to improve the levels of hope and QOL by utilizing the HIP. In addition, the study utilized an in-person hope intervention in a very special period which was during the COVID pandemic. During that time, seniors who lived alone needed to have support to improve their hope and QOL not only for the loneliness but also for the pandemic “isolation” on human interaction. Therefore, the project timing was a strength.

For the HIP evaluation, participants in the experimental group were asked to evaluate the HIP by responding to 16 questions. They were asked to rate the HIP sessions and the exercise activities included in the HIP on a scale of 1 (Most helpful) to 5 (Not

helpful at all) (see Appendix K). All the participants in the experimental group completed the evaluation. The participants' overall evaluation of the HIP was positive. The key findings were that 45.5% rated HIP as "most helpful" and 54.5% rated it as "helpful." No one rated HIP as not helpful. One participant commented that the "sessions truly blessed me. Include me in the next program." Another participant commented that the "classes were wonderful. I wish there was another class."

Project Limitations

Project limitations included sample size, accessibility of the program, length of the program, and self-reported data. The power analysis indicated that a minimum of 17 participants was required in each group. In the current study, even though the experimental group started with 16 participants at the beginning of the HIP intervention, it ended with 11 participants for the final analysis. Even though the data showed a statistical insignificance for hope after the HIP, the HIP interventions had some positive effect on the hope and QOL levels as indicated by the non-parametric tests. Mixed model ANOVA within-subject effects indicated statistical significance for both groups for QOL. Therefore, a larger sample size may be needed to increase study power and statistical certainty.

The project manager also identified the fact that the length of the program was a limitation. During the recruitment, many individuals said that if the program had been for 4-6 weeks, they would have participated in the study. Some individuals also said that if the HIP was offered through online sessions or even as one-on-one sessions, they would have felt comfortable participating. Future studies can be conducted to assess the HIP effects on these variables.

Implications

Hope intervention has the potential of enhancing hope and QOL in elderly people. The data suggested that people experienced an increase in their hope levels, thus positively impacting QOL. The findings indicate that the current study positively influenced the participants who received interventions. The current study findings may add to professionals' knowledge about hope and its effect on hope and QOL in seniors, especially those who live alone.

The HIP instructions were safe, easy to follow, and were an inexpensive way to enhance hope and QOL in participants. Professionals may consider all or some of the aspects of the HIP as a part of their care plan to help others live a hopeful and quality life. Approaches that focus on empathy, encouragement, appreciation for nature, and gratitude which were part of the HIP were shown to be effective in improving hope and QOL in seniors living alone. Nurses should be aware of these intervention approaches to improve hope and QOL in seniors living alone. Study findings may increase interest in other professionals to conduct future studies including multiple sites for recruitment to obtain larger sample size that would allow for more data points, increase the power of the study. Future studies may compare the effects of HIP between individuals who have been cared for either an assisted living facility or at home.

Plan for Dissemination

This study will be sent to ProQuest for publication following the approval of the associated departments of Andrews University in order to expand the distribution of the study findings. A PowerPoint presentation of the study results will be shared at the local home health agency and senior centers. The purpose is to encourage and educate nurses

caring for the elderly to adapt the HIP and perhaps seek other approaches for their sessions as they meet with clients. The project findings will also be presented via poster presentation or oral presentations at nursing conferences or interdisciplinary conferences. A manuscript will be prepared for publication.

Recommendations

According to the study findings, five recommendations are suggested:

- A similar study can be replicated using a larger sample size to increase statistical power.
- A similar study can be conducted to utilize online hope intervention.
- A study could be conducted to investigate the effectiveness of hope intervention between group therapy and one-on-one therapy.
- A study could be conducted to investigate the effectiveness of hope intervention between in-person and on-line therapy.
- This project can be applied to elderly individuals living in assisted living settings.

Use of the DNP Essentials

The doctor of nursing practice (DNP) degree was developed as a response to the complex demands and changes in health care. The project was guided by Essentials for Doctoral Education for Advanced Nursing practice, which are the foundational competencies for an advance practice role (AACN, 2006). Seven of the eight Essentials were utilized (I, II, III, IV, VI, VII, and VIII).

Essential I: Scientific Underpinnings for Practice

Essential I: Scientific Underpinnings for Practice addresses the scientific foundation of nursing and the importance of integrating the science of nursing with mastery from human physiology, psychology, as well as ethics and organizational sciences in order to offer the most advanced practices in nursing (Chism, 2109). The project manager recognized the importance of wholeness of health in individuals and their continued interaction with their surroundings. Working among the elderly population, the project manager identified the factors that were affecting their wellbeing. Feelings of loneliness, pain, depression, anxiety, powerlessness, and hopelessness were some of the identified components affecting the QOL in this population. This recognition along with literature review on QOL and interventions to improve QOL led me to the study topic. This project utilized a systems model theory by Betty Neuman, along with education and hope intervention to seniors living alone to alleviate the feelings of loneliness and improve their hope and QOL levels. The project manager was mindful of the ethics concepts and obtained IRB approval and followed IRB protocol.

Essential II: Organizational and Systems Leadership for Quality Improvement and Systems Thinking

Essential II involves recognizing and assessing the needs of people, communities, and institutions. Conceptualizing new practice models that are founded on nursing science to address the present and future demands of the people is a distinguished aspect of DNP graduates (AACN, 2006). The current study was developed and implemented during COVID 19 challenging times. Essential II assisted the project manager to be keenly aware of the dynamics between organizational processes and their impact on

health care providers' policy changes and the potential effects on those who are receiving care. As an agent of change, it allowed me to research and explore alternative ways, in this case, the HIP, in order to reach the identified population to improve hope and QOL in this population. The project manager plans to share the findings with managers and other professionals in order to implement HIP as one of the quality improvement measures for improving QOL in the elderly population.

Essential III: Clinical Scholarship and Analytical Methods for Evidence-Based Practice

Essential III: Clinical Scholarly and Analytical Methods for Evidence-Based Practice (EBP) focuses on DNP's role of combining clinical experience with scientific research and then translating it into practice, thus enforcing the relationship between science and practice (AACN, 2006). Evidence-based practice that is strengthened by solid research and clinical skill, is central to modern health care. The DNP is poised to play a critical role in its development. As a clinical manager, working in the Home Health industry, the project manager noted that COVID isolation worsened the overall health of those individuals who lived alone in the communities, as well as those who lived in assisted living facilities and yet felt lonely and depressed due to confinement to their rooms. This phenomenon led to reduced healthcare services and a decline in their physical, emotional, and social conditions. This project sought to improve hope and QOL for seniors who lived alone, as well as to evaluate the HIP for uses for future purposes in this identified population in order to deliver evidence-based quality care within the assisted living settings, organizations, and communities.

Essential IV: Information Systems-Technology and Patient-Care Technology for the Improvement and Transformation of Healthcare

Understanding the importance of *Essential IV* assisted me to communicate effectively with the participants and deliver the interventions during this project though the utilization of information systems/technology. The literature is clear that proficiency in information technology is essential in promoting the use of evidence-based practices (Chism, 2019). The project manager investigated and accessed the instruments (HIP and other screening tools), implemented and evaluated the project through these systems in order to address identified issues and improve quality care (Zaccagnini & White, 2017). The project manager utilized text messaging to communicate with the participants as needed and delivered some of the interventions via PowerPoint presentation, making the sessions more meaningful and productive. Statistical analysis was conducted through SPSS. The project manager was successful in completing this study effectively with the help of information systems/technology.

Essential VI: Interprofessional Collaboration for Improving Patient and Population Health Outcomes

Essential VI focuses on facilitating and team building aspects of the DNP's role. Interprofessional collaboration has become an integral part of decision-making with healthcare delivery (Chism, 2109). Working in collaboration with other committee members, the project manager was able to plan, implement, and evaluate this project successfully. Team members consisted of the project chair, a chiropractor, and a statistician. The team members assisted with needed guidance to complete the project. The project manager developed the recruitment flyer in collaboration with the chair and

another committee member and distributed it in the local wellness clinics, communities, churches, and senior centers. The project manager visited the local senior centers and contacted seniors at the wellness clinics to recruit for the study. The project manager communicated the study details in person and via phone with potential participants in order to build interest in participating in the study. The project manager was successful in generating interest in the local wellness clinics and elderly population in order to understand the factors affecting the QOL in the elderly and the strategies for improving QOL in the elderly who live alone.

Essential VII: Clinical Prevention and Population Health for Improving the Nation's Health

This Essential expects the DNP graduates to identify gaps in the healthcare system and develop programs for health promotion and risk-reduction in order to impact the health status of people in multiple settings (AACN, 2006). The project manager achieved these goals by identifying the gap in the literature regarding elderly people living alone and by implementing interventions through HIP to increase their awareness of hope and QOL to promote their wellbeing. Many participants in the experimental group indicated that they were grateful for the project and that the HIP enhanced their knowledge of hope and the resources available to improve and maintain their health and well-being.

Essential VIII: Advanced Nursing Practice

One of the goals of an advanced nurse is to contribute positively to optimal patient care through evidence-based therapeutic interventions. Advanced nurses with a DNP degree are paving the way and influencing patient care each and every day (Chism,

2019). The project manager was able to demonstrate advanced thinking in identifying and incorporating theory, best practice, and in implementing an intervention with the identified population based on the literature findings. Health professionals should continue to evaluate the outcomes of this intervention in order to add to the knowledge, bridge the gap, and promote hope and QOL in the senior population.

Conclusion

This project was conducted during the COVID-19 pandemic in order to bridge the gap in the knowledge of the effects of the Hope Intervention Program on hope and QOL. COVID-19 affected many, especially those that were elderly and lived alone. They were isolated and experienced greater levels of feelings of loneliness, fear, depression, despair, hopelessness, and abandonment (Kasar et al., 2020).

The project addressed the essential needs of the growing elderly population in order to improve the levels of hope and QOL by utilizing the HIP during these challenging times. Even though the data demonstrated no statistical insignificance in improving hope and QOL after the intervention, many seniors still wanted to get out of the house and be supported by others. This theme came out repeatedly during the sessions, positively affecting others who were unsure of the in-person sessions. The participants were provided with resources that are available in the community to assist seniors. This study gave an opportunity for the elderly in the community to enjoy life again through coming together, sharing, discussion, learning, connecting with others, and building new relationships.

APPENDIX A

HOPE INTERVENTION PROGRAM (HIP)

Table 1. Hope Intervention Program

Session	Hope Guiding Process Framework	Goals	Content/Activities
Session 1: Building a Sense of Community	Introduction	• Establish a caring and supportive environment. • Begin to build a sense of community.	• Overview of sessions • Getting acquainted exercises • Review of information about disease, exercises, medication, and pain control (Resource Guide Book)
Sessions 2 and 3: Searching for Hope	Experimental Process	• Express fears, questions, expectations, and hopes. • Share one's own story. • Identify threats to hope. • Identify areas of hope in life and recognize the interplay between hope and hopelessness.	• Discuss meaning of hope and hope as active waiting. • Discuss dialectic relationship between hope and hopelessness. • Discuss threats to hope. • Develop a hope mantel. • Begin a hope journal, tape, or drawing to chronicle one's hope journey.
Session 4: Connecting With Others	Relational Process	• Identify the current and potential support system. • Recognize the interdependent influence of families/friends. • Identify ways to establish a sense of sustained connectedness with others. • Select and mobilize community resources, both human and material. • Educate significant others about how they can be resources in the hope process.	• Discuss the reciprocal/interdependent nature of hope. • Discuss the role of family and friends in the hope journey. • Discuss community resources. • Develop a list of one's hopelets. • Develop a hope energy savers basket.
Session 5: Expanding the Boundaries	Spiritual/Transcendent Process	• Reflect on the meaning and purpose of life, death, and suffering. • Identify and mobilize spiritual resources. • Identify small joys and maximize aesthetic experiences. • Encourage creative expressions of hope.	• Discuss and implement value clarification exercises (focus on values thought important and usual sources of strength). • Discuss and share possible spiritual resources. • Implement life awareness activities. • Develop a joy collage. • Discuss photos/pictures that represent hope.
Sessions 6 and 7: Building the Hopeful Veneer	Rational Thought Process	• Learn the skill of reality surveillance. • Identify and support strengths. • Develop stepwise goals. • Identify and nurture internal resources (e.g., determination, courage, optimism). • Teach and support the use of cognitive reframing. • Reinforce strengths/accomplishments from the past. • Identify and develop a plan for incorporating energizing strategies. • Develop an appreciation for the fullness of each moment and each day. • Nurture a sense of lightheartedness.	• Discuss reality surveillance and goal setting as it impacts hope. • Discuss success mapping. • Develop a hope kit. • Discuss and practice a variety of cognitive reframing strategies. • Discuss the role of past memories on hope. • Begin a hope memories book. • Discuss the role of nature in hope. • Discuss the value of lightheartedness, and discuss how to engender more in one's life (e.g., funny bone exercises).
Session 8: Reflecting and Evaluating	Conclusion and Evaluation	• Develop specific plans to maintain and engender hope(s) in the future. • Evaluate effectiveness of the program (strengths and weaknesses).	• Share current and potential future use of the hope mantel and the hope journal, tape, or drawing. • Discuss a hope engendering and maintenance plan. • Develop a phone, e-mail, or chat room networking system. • Complete the program evaluation tool.

Table 2. Hope-Engendering Exercises and Activities

Exercise/Activity	Description
Hope mantel	Cut a piece of paper in the shape of a shield. Draw a circle and list (identify) on the shield • A hope experience in the past • Someone who has modeled hope for you • A belief that helps you be hopeful • A sense experience that enhanced your hope • Something you do regularly that sustains your hope
Hope journal/tape/drawing	Daily share your hope journey either through writing in a diary, recording on a tape recorder, or drawing.
Hopelets	List those individuals who have engendered your hope—be specific as to how they have done this.
Hope energy savers basket	Write down on a piece of paper or 3 x 5 card a specific task that someone else could do to help you save energy for hope work. Include shopping, yard, household, and "lifting the spirit" activities. When someone says "I wish I could do something for you," give them the opportunity to go to the basket and look through the cards for activities they may want to do.
Joy collage	Collect pictures and images of those things in life that bring or could bring you joy and lift your spirit.
Hope kit	Decide on the container for your kit. Place in your kit those things that concretely represent things that may be intangible but are important to your hope.
Hope memories book	Place photos, poems, and images in an album that represent hope to you from your past. Label the hope memory that it represents.
Value-clarification exercises	Identify values that are important to you and what usually gives you strength.
Life-awareness activities	During the week, pay specific attention to your senses (i.e., sight, sound, smell, and touch). • Fragrances (smell): Identify and write down the fragrance, its sources, and what significance it has from the past for you. • Messages (sound): Write down the message and its source. • Beauty (sight): See the beauty within the environment (sunrise, flowers). • Feel (touch) the soft blanket or touch of a loved one's hand.
Goal-redefining exercise	Write down a goal and at least five different ways to meet that goal.

APPENDIX B

STUDY QUALIFICATION CRITERIA

Qualifying Screening Items

- 65 years or older
- Lives alone
- Able to speak and read English
- Score 0-2 in Eastern Clinical Oncology Group (ECOG) performance status screening (See Appendix C)

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APPENDIX C

EASTERN CLINICAL ONCOLOGY GROUP

PERFORMANCE STATUS

Grade	Description of patient
0	Fully active, able to carry on all predisease performance without restriction
1	Restricted in physically strenuous activity but ambulatory and able to carry out work of a light or sedentary nature, e.g., light housework, office work
2	Ambulatory and capable of all self-care but unable to carry out any work activities; up and about more than 50% of waking hours
3	Capable of only limited self-care; confined to bed or chair more than 50% of waking hours
4	Completely disabled; cannot carry on any self-care; totally confined to bed or chair
5	Dead

Source: Eastern Clinical Oncology Group

APPENDIX D

HERTH HOPE INDEX

	Strongly Disagree	Disagree	Agree	Strongly Agree
1. I have a positive outlook toward life.				
2. I have short and/or long-range goals.				
3. I feel all alone.				
4. I can see possibilities in the midst of difficulties.				
5. I have a faith that gives me comfort.				
6. I feel scared about my future.				
7. I can recall happy/joyful times.				
8. I have deep inner strength.				
9. I am able to give and receive caring/love.				
10. I have a sense of direction.				
11. I believe that each day has potential.				
12. I feel my life has value and worth.				

1999 items 2 & 4 reworded
HHI is used with permission of Dr. Kaye Herth.

APPENDIX E

PERMISSION FOR HHI

(E-mail content)

Dear Sophia,

I have attached a copy of the HHS and HHI, scoring instructions, and a reference list of published articles using these tools. You have my permission to use either the HHS or HHI in your DNP project. I look forward to hearing about your work as it moves forward.

Best wishes,

Dr. Kaye Herth

Dean Emerita

Minnesota State University, Mankato

Tue, Apr 21, 2020 8:53 am

Herth, Kaye A (kaye.herth@mnsu.edu)

APPENDIX F

OPQOL SCALE

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. I enjoy my life overall.					
2. I am happy much of the time.					
3. I look forward to things.					
4. Life gets me down.					
5. I have a lot of physical energy.					
6. Pain affects my well-being.					
7. My health restricts me looking after myself or my home.					
8. I am healthy enough to get out and about.					
9. My family, friends or neighbors would help me if needed.					
10. I would like more companionship or contact with other people.					
11. I have someone who gives me love and affection.					
12. I'd like more people to enjoy life with.					
12 (a). have my children around which is important.					
13. I am healthy enough to have my independence.					
14. I can please myself what I do.					

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
15. The cost of things compared to my pension/income restricts my life.					
16. I have a lot of control over the important things in my life.					
17. I feel safe where I live.					
18. The local shops, services and facilities are good overall.					
19. I get pleasure from my home.					
20. I find my neighborhood friendly.					
21. I take life as it comes and make the best of things.					
22. I feel lucky compared to most people.					
23. I tend to look on the bright side.					
24. If my health limits social/leisure activities, then I will compensate and find something else I can do.					
25. I have enough money to pay for household bills.					
26. I have enough money to pay for household repairs or help needed in the house.					
27. I can afford to buy what I want to.					

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
28. I cannot afford to do things I would enjoy.					
29. I have social or leisure activities/hobbies that I enjoy doing.					
30. I try to stay involved with things.					
31. I do paid or unpaid work or activities that give me a role in life.					
32. I have responsibilities to others that restrict my social or leisure activities.					
33. Religion, belief or philosophy is important to my quality of life.					
34. Cultural/religious events/festivals are important to my quality of life.					

From the Public Domain.

APPENDIX G

IRB LETTER OF APPROVAL

Andrews University
Office of Research & Creative Scholarship

February 8, 2022

Sophia Abraham
Tel. 269-921-6697
Email: sophia@andrews.edu

RE: APPLICATION FOR APPROVAL OF RESEARCH INVOLVING HUMAN SUBJECTS
IRB Protocol #:21-155 **Application Type:** Original **Dept.:** Nursing
Review Category: Exempt **Action Taken**: Approved **Advisor:** Grace Chi
Title: Effects of hope intervention on hope and quality of life in senior people who live alone.

Your IRB application for approval of research involving human subjects entitled: "*Effects of hope intervention on hope and quality of life in senior people who live alone*" IRB protocol # 21-155 has been evaluated and determined Exempt from IRB review under regulation CFR 46.104 (2)(i): Research that includes survey procedures in which information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subject. You may now proceed with your research.

Please note that any future changes made to the study design and or the informed consent form require prior approval from the IRB before such changes can be implemented. Incase you need to make changes please use the attached report form.

While there appears to be no more than minimum risks with your study, should an incidence occur that results in a research-related adverse reaction and or physical injury, this must be reported immediately in writing to the IRB. Any research-related physical injury must also be reported immediately to the University Physician, Dr. Katherine, by calling (269) 473-2222.

We ask that you reference the protocol number in any future correspondence regarding this study for easy retrieval of information.

Best wishes in your research.

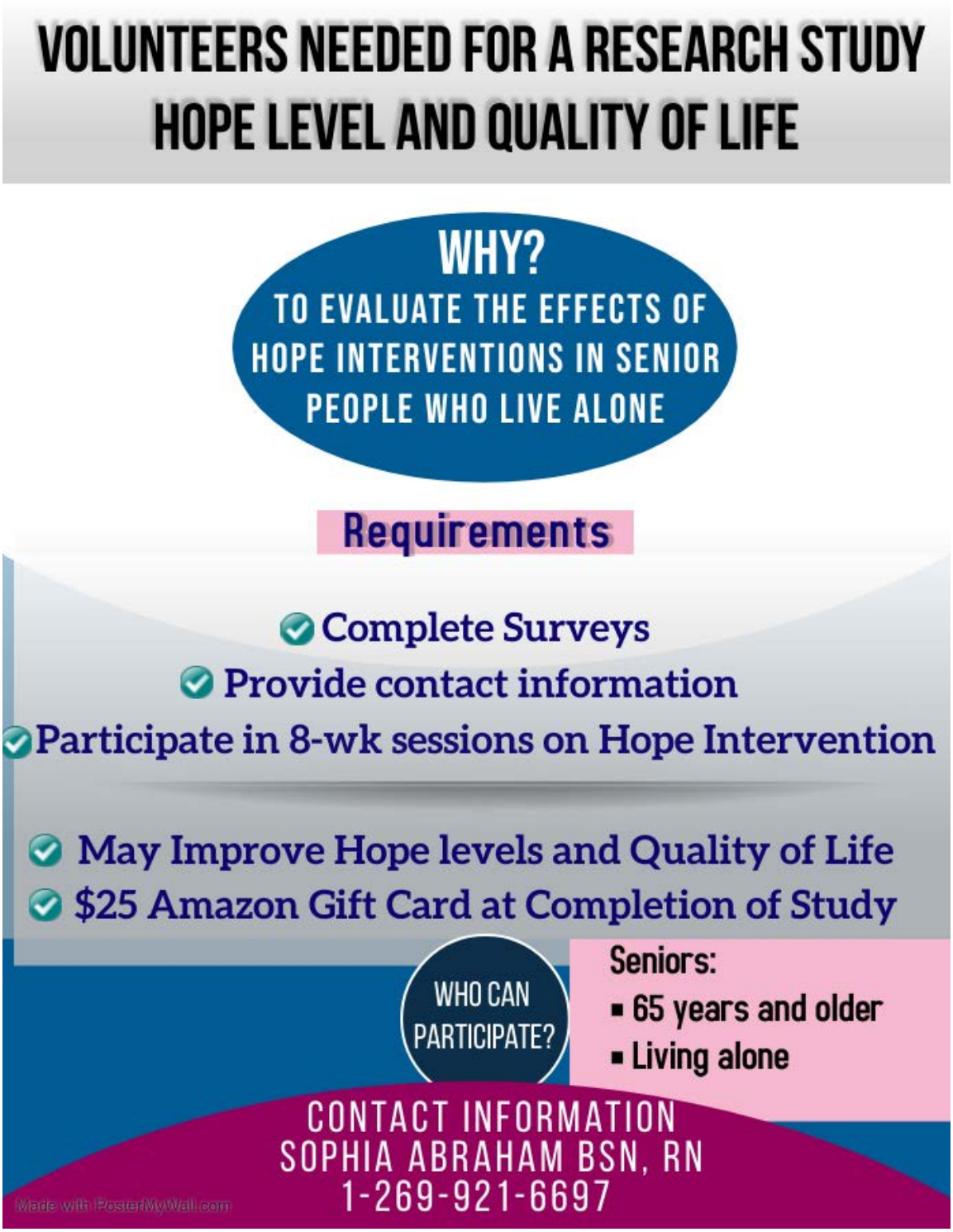
Sincerely,

Mordekai Ongo, PhD.
Research Integrity and Compliance Officer

Institutional Review Board – 8488 E Campus Circle Dr Room 234 - Berrien Springs, MI 49104-0355
Tel: (269) 471-6361 E-mail: irb@andrews.edu

APPENDIX H

INVITATION FLYER


VOLUNTEERS NEEDED FOR A RESEARCH STUDY
HOPE LEVEL AND QUALITY OF LIFE
WHY?
TO EVALUATE THE EFFECTS OF HOPE INTERVENTIONS IN SENIOR PEOPLE WHO LIVE ALONE
Requirements
Complete Surveys
Provide contact information
Participate in 8-wk sessions on Hope Intervention
May Improve Hope levels and Quality of Life
$25 Amazon Gift Card at Completion of Study
WHO CAN PARTICIPATE?
Seniors:
65 years and older
Living alone
CONTACT INFORMATION
SOPHIA ABRAHAM BSN, RN
1-269-921-6697
Made with PosterMyWall.com

APPENDIX I

CONSENT FORM

Andrews University, Department of Nursing

Effects of Hope Interventions on Hope and Quality of Life in Senior People who Live Alone

Project Manager: Sophia Abraham RN, BSN.

Faculty Advisor: Dr. Grace Chi, PhD.

Informed Consent to Participate in Study

You are invited to take part in a research study regarding the effects of Hope Interventions on Hope and Quality of Life in Senior People who Live Alone. The researcher is inviting seniors aged 65 and older who live alone, to be in the study. This form is part of a process called "informed consent" to allow you to understand this study before deciding whether to take part.

This study is being conducted by a researcher named Sophia Abraham, who is a Doctoral Nursing student at Andrews University.

Background Information:

The purpose of this project is to evaluate the effects of the non-pharmacological intervention, in this case, the utilization of Hope interventions on hope and on the quality of life in senior people who live alone.

Procedures:

If you agree to be in this study, you will be asked to:

- Read and sign the consent form, which should take approximately ten minutes to complete.
- Complete 3 surveys, which should take about fifteen minutes to complete.

- You will be asked to participate in 8-weeks interventions at the local wellness clinic if qualified and assigned to the experimental group.
- These survey data will be collected before and after the interventions.

Here are some sample questions:

- Do you have a positive outlook toward life?
- Do you believe that each day has potential?
- Do you have short and/or long-range goals?
- Do you feel my life has value and worth?
- Are you healthy enough to be independent?

Voluntary Nature of the Study:

This study is voluntary. Everyone will respect your decision of whether or not you choose to be in the study. No one will treat you differently if you decide not to be in the study. If you decide to join the study now, you can still change your mind later. You may stop at any time.

Risks and Benefits of Being in the Study:

This study will be conducted in a group session. Being in this type of study involves some risk of minor discomforts that can be encountered in daily life, such as minimal tiredness, slight stress, or becoming upset. Being in this study would not pose risk to your safety or wellbeing.

The study will benefit not only the elders who live alone, but also can assist the families, community members, and healthcare professionals to help provide interventions to elderly people to improve the levels of hope and improve their Quality of life.

Payment:

After completion of the 8-weeks program, participants will receive a &25.00 gift card.

Privacy/Confidentiality:

Any information you provide will be kept anonymous. The researcher will not have access to your personal information. Thus, the researcher will not include your name or anything else that could identify you in the study reports. Data will be kept secure by a password-protected computer, with which only the researcher will have access.

Contacts and Questions:

You may ask any questions you have now. Or if you have questions later, you may contact the researcher via email at sophiaa@andrews.edu or phone at 269-921-6697. If you want to talk privately about your rights as a participant, you can call Dr. Chi. She is the Andrews University representative who can discuss this with you. Her phone number is 817-648-3799.

Statement of Consent:

I have read the above information and I feel I understand the study well enough to make a decision about my involvement. By signing below, I understand that I am agreeing to the terms described above.

APPENDIX J

DEMOGRAPHIC QUESTIONNAIRE

Select the item that best represents you.

1. What gender do you identify as?
    a. Male
    b. Female

2. How would you describe yourself?
    a. American Indian or Alaska Native
    b. Asian
    c. Black or African American
    d. Native Hawaiian or other Pacific Islander
    e. White
    f. Other

3. What is your marital status?
    a. Single
    b. Married
    c. Divorced
    d. Widowed

4. What is your educational level?

    a. Elementary school graduate
    b. Jr. High school graduate
    c. High school graduate
    d. College graduate
    e. Graduate

APPENDIX K

PARTICIPANTS' EVALUATION OF HOPE INTERVENTION PROGRAM

	Most Helpful	Helpful	Neutral	Least Helpful	Not Helpful at All
1. Overall helpfulness of Hope Intervention Program (HIP)	*n*=5 45.5%	*n*=6 54.5%			
2. Sessions 2 and 3 (searching for hope)	*n*=2 18.2%	*n*=9 81.8%			
3. Session 4 (connecting with others)	*n*=5 45.5%	n=6 54.5%			
4. Session 5 (expanding the boundaries)	*n*=2 18.2%	*n*=7 63.6%	*n*=2 18.2%		
5. Sessions 6 and 7 (building the hopeful veneer)	*n*=3 27.3%	*n*=8 72.7%			
6. Hope mantel	*n*=3 27.3%	*n*=8 72.7%			
7. Hope journal, tape, or drawing	*n*=3 27.3%	*n*=7 63.6%	*n*=1 9.1%		
8. Hopelets	*n*=2 18.2%	*n*=6 54.5%	*n*=2 18.2%	*n*=1 9.1%	
9. Hope energy savers	*n*=2 18.2%	*n*=7 63.6%	*n*=2 18.2%		
10. Joy collage	*n*=7 63.6%	*n*=3 27.3%	*n*=1 9.1%		
11. Hope kit	*n*=5 45.5%	*n*=5 45.5%	*n*=1 9.1%		
12. Hope memories book	*n*=6 54.5%	*n*=5 45.5%			
13. Value-clarification exercises	*n*=3 27.3%	*n*=7 63.6%	*n*=1 9.1%		
14. Life-awareness activities	*n*=2 18.2%	*n*=9 81.8%			
15. Goal-redefining exercise	*n*=4 36.4%	*n*=6 54.5%	*n*=1 9.1%		
16. None of the exercises or activities					*n*=11 100%

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